DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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WHAT DOES "MAY" MEAN.

Up like a princess starts the merry morning,
In draperies of many-colored c oud;
And sky-larks, minstrels of the early dawning,
Pipe forth their hearty welcomes long and loud.
John Clare.

NAMES grow out of things; they are the spoken sign of a thought, or idea. We speak of a "peach," and that word carries to the mind of the hearer the size, shape, color and flavor of that fruit. He understands it perfectly, and it is in this way that we communicate our own sensations to others, and interchange thought, feeling and action with all who use the same language.

What we greatly need, in order to feel the full force of a word, is to know how it was derived,—that is, from what *form* or *feeling*. We should have a very imperfect idea of a lion, if we had never seen one, nor had any description of one. He who has never had the attribute of mercy warm his heart, nor been touched by the emotions of pity, could scarcely have a realizing sense of what the meaning of these words is.

Language grows with our material growth. New arts and sciences require new names by which they may be expressed, and these names grow out of some peculiarity in the art or thing itself.

In speaking of *April*, a month ago, we suggested that the meaning of the name might have come from the Latin word *Aprilis* from *aperio*, to *open* or *set forth*. That is, the earth is loosened from the icy fetters which have made it almost solid for some months. The brooks flow. The vital spark rekindles in dormant existences, and all things live and move and have their being again.

We are indebted to the old Romans for many of the words we use, and for the names of particular things. We probably are for the word MAY, the name of the present month, some portions of which can scarcely be surpassed by the finest days of June. These people did not worship one God, the Creator and Author of all things, but had divinities whom they worshipped under many names. They had celestial and terrestrial gods and goddesses; gods of the woods, and rural deities; gods of the sea; infernal deities and monsters, and good and evil deities.

One of these goddesses was "*Maia*," whose chief title was *Bona Dea*, or the "Good Goddess," who represented the earth itself, and all that is good and beautiful upon it. So they had her figure carved, gorgeously dressed and placed where the people could approach her and pay their homage. "On the earth are built many towers and castles, so on her head they placed a crown of towers. In her hand she carries a key, for in winter the earth locks up these treasures which she brings forth and dispenses with so much plenty in

summer. She rides in a chariot, because the earth hangs suspended in the air, balanced and poised by its own weight. But that chariot is supported by wheels, since the earth is a revolving body, and turns round; and it is drawn by lions, because nothing is so fierce, so savage, or so ungovernable, but a motherly piety and tenderness is able to tame it, and make it submit to the yoke. Her garments are painted with divers colors, and figured with the images of several creatures, as everybody sees that such a dress is suitable to the earth.

It is pleasant, as month after month rolls round, to know something of the meaning of their names, and how they came by them.

By our old Saxon ancestors, *May* was called *Tri-milki*, "because (as an old writer says,) in that month they began to milke their kine three times in the day."

In England, the first of May has long been celebrated as one of the most joyous occasions of the year. Old and young turned out and decorated themselves with evergreen branches and flowers; troops of horse paraded the streets, half smothered with green boughs and leaves; long poles were set up and twined about with wreaths and garlands, while merry men and women and boys and girls danced around them amid the fragrance of a profusion of flowers. There was great rivalry among them to see which could bring out the most rare shrub or the largest quantity of green plants. So far was this carried, that "some would openly show boughs of birch which were privately made green long before the usual time, by art, as by the heat of their stoves and watering them, and privately brought in as if they newly came from the wood."

In our climate, until the first of May is *postponed until the first of June* we shall not be able to engage in similar festivities. Some of our "young folk," however, annually encase themselves in mittens, over coats and rubber boots, rush to the bleak pastures and leafless woods for some *green thing*, or tiny flower that has dared to peep out from some obstinate snow-drift, in order to see whether Spring was really coming or not! But they soon find sharp exercise more grateful even than spring flowers, and rush back, blue and shivering, to the warm room, (we wish we could say fireside) to console themselves by reading the poets who sing of the beauties of the first of May.

We never shall get up much enthusiasm for *May* until she materially changes her habits; and these are so thoroughly established, that it is hardly worth while to make any effort. But instead, let us make more of our old, time-honored *Election Day*, which comes a little later, or the fourth of July, when we can get flowers and green peas, also. Let us try that for awhile, and let May have her own way.

"CASTING THE WITHERS."

Casting the withers, or inversion of the uterus, is a serious trouble of frequent occurrence among cows after calving. Mr. I. B. Puffer of Putney, Vt., informs us that himself and two of his neighbors have each saved cows when in this situation by tying a cord tightly around the protruding mass, near the body, and cutting off the part below the cord, and afterward fattening the cows. If the entire uterus protrudes, and the cord is tied above it, around the membrane connecting it with the vagina, and the section is made so as to remove the entire womb, we think it may succeed. No part of the womb should be left. If the uterus cannot be returned, it may be well to try this method to save the life of the animal. The "casting of the withers" is caused by the womb becoming turned inside out, as when a man in taking off his coat turns the sleeve wrong side out. The way to replace the withers is precisely that which a man would take to return his sleeve to its proper condition. He would take hold of the cuff and push his arm through the sleeve to the whole length of his arm. So here, the hand must be placed on the fundus or upper end of the womb, which will now be at the bottom of the hanging mass, and be pushed up through the cavity of the womb into the vagina, and this process must be gently persisted in, until the organ is replaced in its natural position. It generally requires the arm of the operator to be pushed into the body its entire length. It would do no good in returning a sleeve to re-turn it half its length. The work must be done completely. So in this case, if the reinversion is partially done the womb will inevitably fall again. When properly restored to its place, it gen-

erally remains without further trouble. It will hardly be safe to allow a cow that has once had inversion of the womb to have another calf.

One who understands the true nature of the difficulty, and the anatomy of the parts, will have little difficulty in restoring the inverted organ if done before the parts become swollen and cold. Before any attempts to restore the organ, it should be carefully cleaned by bathing in warm water.

We trust that the students at the agricultural colleges will be instructed in the more common veterinary operations at least, so that they may be prepared to meet the difficulties that are liable to occur in every farm-yard in the country.

SEXES OF ANIMALS AT WILL.

Much inconvenience and loss is felt by all breeders of cattle for the dairy in having such a large proportion of male animals. These are not wanted for working cattle or for beef, and so are fattened as rapidly as possible and sold out of the way. The consequence of this is, that the number of calves which the farmer has to select from to keep up his dairy stock, is reduced more than one-half, which frequently induces him to raise heifer calves that are defective in some points, or, at any rate, do not come up to the standard which he would like to preserve.

We present below an article on the subject of "producing sexes at will," not because the theory is entirely new, but as a *timely suggestion* to those who have cows to provide for at this particular season of the year. If careful observation is made, and the facts recorded, what must seem to many now as a mere *theory* may be so corroborated by a multitude of instances as to remove doubt from all minds, or fail in so many as to prove that the whole matter is still veiled in uncertainty.

For many years eminent naturalists have been satisfied of the near discovery of a practical way to produce the sexes at will. M. Thury had the good luck to be the first one in putting the law in practice, as the following certificate and remarks, which we copy from the correspondence of the *Southern Cultivator* shows, translated nearly in its full extent:

"I, the undersigned, George Cornaz, the overseer of the estate of my late father, M. A. Cornaz, President of the Societie d' Agriculture, de la Suise romande, Montet, Canton de Vaud, do hereby certify, that having received from M. Thury, a Professor at the Academie de Geneve, on the 18th day of February, 1861, some confidential directions for the purpose of verifying by experiments the law regulating the production of sexes amongst the animals, I used with my herd of cows the directions given by M. Thury, and I obtained, immediately, without any variation, all the expected results and successes.

In the first place, on twenty-two successive occasions, I desired to have heifers. My cows were of Schwitz breed, and my bull a pure Durham. I succeeded in all these cases. Having bought a pure Durham cow, it was very important for me to have a new bull, to supersede the one I had bought at great expense, and without leaving to chance the production of a young male. So I followed, accordingly, the prescriptions of Prof. Thury, and the success has proved once more the truth of the law. I have obtained from my Durham bull six more bulls (Schwitz Durham cross) for field work; and, having chosen cows of the same color and height, I obtained perfect matches of oxen. My herd amounted to forty cows of every age.

In short, I have made in all twenty-nine experiments after the new method, and in every one I succeeded in the production of what I was looking for—male or female. I had not one single failure. All the experiments have been made by myself, without any other person's intervention; consequently I do declare that I consider as real and certainly perfect, the method of Prof Thury, &c.

Done at Montet, February the 13th, 1867.

Signed, G. CORNAZ."

On the 17th of August, 1863, M. Thury submitted a memorial to the Academie de Sciences de Paris, and the French Emperor ordered the renewing of the experiments in several large "fermes modeles." These curious trials have been made also with equal success in the case of other animals, as horses, sheep, goats, &c. It is also known, that with hen's eggs, the first laid give female, and the last laid give male products. The law is general till the end of the laying season, when the number of female production exceeds the male, under circumstances not yet sufficiently ascertained to be reported.

It is on account of this new practical law that the people can explain why the stock raiser must give young bulls to his cows. The bull, when young, is more prompt, and meets the female at the beginning of the heat; instead of a bull old or exhausted, or lazy by long service, which meets the cow only at the end of the heat. The first gives heifers—the second produces generally males.

The law for stock raisers and farmers is as follows; If you wish to produce females, give the male at the first signs of heat; if you wish males, give him at the end of the heat. T. DE R——.

Thibadeaux, La., March, 1867.

MICHIGAN AGRICULTURAL COLLEGE.—The bill appropriating $70,000 to this institution has passed the legislature of Michigan by a vote in the House of 58 yeas to 28 nays, and in the Senate by 22 yeas to 8 nays. As the legislature meets only once in two years, $20,000 of this sum is appropriated for the use and support of the college in 1869, $20,000 for 1870, and $30,000 for a new hall, chiefly for additional dormitories for the accommodation of students. No part, we believe, of the fund from the Congressional appropriation of lands has as yet been expended.

HUMUS---LIME.

HUMUS is vegetable matter in a state of decomposition, and supplies the source whence plants principally derive their food. The power of enduing soils with fertility is one of the most important in the routine of farming operations, and is effected in a variety of ways; but the most economical and efficacious method, perhaps, is the *turning in of green crops.*

When this method is adopted, the plants selected should be such as are capacitated by nature to derive the principal part of their sustenance from the air, and which are therefore the less likely to exhaust the soil of the limited amount of *humus* contained in it during the development of the growing crop.

Up to the period of inflorescence, those plants denominated aerial, or belonging to the air,—and among which may be enumerated buckwheat, peas, and the clovers,—draw but slightly upon the resources of the soil; the economy of vegetation being such in regard to them, that but a comparatively slight degree of aliment is required from this source. This enables us to account for the well-known fact that some crops, nearly deficient in productive energy, often produce a large amount of *straw*, though they fail in maturing a crop of grain.

When vegetables of an aerial character are inhumed by being carefully turned under with the plough, and embedded compactly in the soil, the vegetable fibre, or organized structure of the plant, is speedily resolved into *humus*; the fermentive and putrefactive process being accomplished with greater or lesser rapidity according to the character of the atmosphere, and the condition of the soil, as regards humidity, at the time it is turned down. The gaseous products of the mass, eliminated during the process of fermentation, are eagerly absorbed by the soil; while the other products, i. e., those of a solid character, if permitted to remain undisturbed, are soon incorporated and mixed with it; but should the soil be again ploughed before the important process of decomposition has been thoroughly effected, —which is too frequently the case, especially where a dry crop succeeds a green one,—much the larger portions of the gaseous, and no inconsiderable portion of the solid products, will inevitably be dissipated and lost to the soil.

In order to avoid this loss of valuable principles, and render the application more immediately appropriable by the growing crop, it has been recommended to sow lime, from five to twenty bushels per acre, before turning down. The efficiency of this mineral is now too generally well known to admit of any question, and in no way, perhaps, is its application more immediately beneficial than as an accompaniment for green crops, when turned in as a help for lands that are poor and light.

Such soils frequently abound in acids. These are sometimes native to the soil, and sometimes produced or added to it by the substances applied as manure. But whatever may be their origin, they are speedily neutralized by the use of lime. The fact is now well understood that all plants, grown for food, require lime for the perfection of their seeds. Its free use, therefore, in agriculture is recommended by DANA and HITCHCOCK. These writers contemplate its action as threefold, each distinct.

1st. It is a *neutralizer*. Either in its calcined state, or in the form of a carbonate, lime, according to their authority, will combine with any acid that may be present in the soil in a free state. And they say:—

"If the carbonate of lime is employed, the carbonic acid which it contained is set free, and becomes food for plants.

"It is a *decomposer*. Many of the metallic oxides will be decomposed by lime, and their components will form new combinations, or be absorbed by plants."

According to Dr. Dana's views of *geine*, the soil may be affluent in *geates*,—or in other words, *geic acid* will combine with earths and metals and form salts not easily soluble, but which lime will decompose and render soluble.

It is a *converter*. "The great use of lime," remarks Professor Hitchcock, "is as a converter, turning solid, insoluble geine—nay, I may go further—*solid vegetable fibre*, into *solid vegetable food*."

Calcareous earth, that is, chalky, or limy, is applied in one of three different forms, viz:

As calcined, (burnt) lime, either in a slaked or unslaked state, as a carbonate of lime; that is, either pulverized lime, shell marl, or clays

in which marl exists; or, indeed, in any form in which it exists, and can, without too much expense, be obtained, and thoroughly incorporated with the soil to be ameliorated or improved.

As sulphate of lime, or gypsum—known commonly as plaster of Paris—the "Alabaster of the arts."

Sir HUMPHREY DAVY, whose opinions on most subjects connected with agriculture are eminently deserving of respect, asserts that, "when lime is mixed with any moist, fibrous vegetable matter, whether freshly burned or slaked, there is a powerful action produced; the two forming a kind of compost together, a part of which, at least, is soluble in water."

How much lime may be necessary to effect a thorough and permanent improvement of the soil, is a question to be determined only by careful experiment. In some cases the quantity will be large, but in all its action will be beneficial and perceptible in the crop.

CHINESE CLOVER.

We have noticed several statements of late in respect to the appearance of clover and other grasses at the South, which some have supposed were introduced in the hay fed to the horses of the Northern troops during the late war. The following notice of a new clover is from the *Dixie Farmer*:—

The Chinese clover, which is also called "Japan Clover," "Little Wild Clover," and "Secession Clover," first attracted attention in 1862 on the Saluda river, near old "96," in South Carolina.

It now overruns all the old fields in the northern portion of this State, and grows to some extent in the oak and hickory forests. It is rapidly spreading in the middle section of the State, and I have been informed, flourishes luxuriantly, on the sea coast. Before it has fully taken possession of the land, it is a creeping plant, and subsequently assumes an upright form. It makes its appearance and blooms early in the spring, remaining green till late in the fall. Seed very minute and apparently extremely difficut to gather. Flowers white and red, and quite small. When it begins to appear in any region, it is first observed along the public roads, and afterwards along those less travelled. On ordinary lands, if undisturbed, will grow from eight to ten inches high. It will "eat out" broom sedge in an old field, and will, it is claimed, "eat out" and replace Bermuda grass. It is readily destroyed by the plough, and therefore, does not interfere with tillage. Stock of all kinds eat it, and when ploughing, are extremely fond of it. The appearance of this clover in South Carolina is spontaneous, and no satisfactory theory as to its origin has been advanced.

For the New England Farmer.

THE GARDEN IN MAY.

May brings with it a pressure of work. Occasionally the chilling winds and abundance of rain and frosts of a late season cause impatience in the delay; or, if the season is forward, we are pressed with work, and the question is, not what needs doing, but what shall be done first? In our own experience of some twenty-five years since commencing for ourselves in the garden and on the farm, we have found that nothing is gained in doing planting and such work in advance of its season. After a long cold winter and repeated cold spring rains, it takes a certain space of time for the ground to come into a suitable condition to work, or for the seeds to be deposited therein. It must settle, drain and warm up to a suitable degree before most seeds will germinate in the soil. We recollect many a time, in the enthusiasm of our younger inexperience, of having to do our work over in the garden from having planted so early that untimely frosts cut off our plants after they had come up finely. A warm spell occurring in April, or early in May, makes us impatient to get the seed into the ground, that we may have a garden a little ahead of any of our neighbors; but in our variable New England climate, it is an unsafe operation to plant any, except the more hardy varieties, till settled warm weather in May, which varies in date with different seasons. A good sheltered location for a garden, with previous preparation of underdraining, trenching, and high enrichment, which promotes earliness, will be appreciated now in warding off frosts, cold winds, &c., during spring.

ASPARAGUS.—The beds will now begin to afford us a supply for the table or market. Care is needed in cutting, not to injure the starting buds or crowns of the plants. How few, comparatively, of our farmers raise this most delicious vegetable, even for their own table. It is very easily raised, and furnishes a dish for the table much relished by all, and would be more generally raised were its merits better known.

BEANS.—There is a difference in the hardiness of garden beans; and only the more hardy kinds should be planted till the middle or latter part of the month. Lima and the more tender pole beans, succomb to a light frost, and then the planting must be done over. Dwarf or bush varieties may be planted a little earlier, and if frost is threatened, a board may be laid over the row, resting on bricks or blocks to avoid crushing the plants. Plant out pole beans after frosts are past; set the

poles first, firmly in the ground, four feet apart, and plant six or eight beans around each pole,—leave the Limas till the last, and be sure and stick them eyes down, barely covering them with one fourth an inch of fine soil. The *Germantown Telegraph* says that greasing the beans before planting prevents them from rotting, and does not injure their germination.

BEETS.—These being quite hardy, may be planted as soon as the ground is ready to receive the seed. Sow in drills eighteen inches apart, covering the seed half an inch deep,—drop the seed three or four inches apart and thin out to six or eight inches, after they get started. More than one plant will be likely to come from what appears as one seed, which in reality is an envelope containing several seeds. The plants allowed to get a little growth make excellent greens, and often are allowed to grow till likely to interfere, before being pulled out for this purpose.

CABBAGE.—Early sorts will usually answer to transplant during the month. Seed may be sown of both early and late varieties in the open ground. The varieties are numerous, some late sorts growing enormous heads, others much smaller, more tender, and better flavored. All the mammoth kinds are more or less coarse, with large leaf stems and veins; the medium and smaller growing heads will be found the best for eating,—the mammoth for market.

CARROTS.—For our New England climate, May is early enough, and some think too early to sow carrots. A few radish seed sown with the carrot will enable one to distinguish the rows much better, and the weeds can be better kept in subjection without injury to the carrots; clean culture makes clean good crops.

CORN.—Plant as soon as the soil is warm. A few hills may be started on sods, in the hot-bed, and set in the open ground, after late frosts are past. The Mexican and Trimbles, are two as good sorts as one could wish; the Mexican being a small eight rowed variety and the Trimble a good sized, twelve rowed sort, soft and rich when in its prime. The Mexican has small kernels, sweet, and excellent for eating from the cob, as the seed comes out clean and free from hulls. J. J. H. Gregory advertises it by the package. I have none for sale.

CUCUMBERS.—About the middle of the month is soon enough to plant in the open ground, to escape frosts. According to the "weather wise" we shall have frosts the latter half of the month to injure vegetation. A few hills can be started on sods in the hot-bed to be transplanted the last of the month, and get a little advantage over those planted in the open ground.

LETTUCE.—Transplant from the the hot-bed and cold frames. Sow seeds in the open ground for succession. Applications of liquid manure, or guano in judicious quantities, will give large results.

ONIONS.—If not already planted, plant onion seeds in rich well-prepared beds. Set out tops, sets, and potato onions, as early in the month as possible. Early sown seed produces best results.

PEAS.—Repeat planting of early sorts for succession, and put in late sorts of Marrowfats, and the better sorts. Pea brush should be put to the peas soon after they come up, as the longer deferred the less inclined the vines are to take hold of them.

POTATOES.—Plant as soon as the ground is in readiness, as early planted do the best, of late years; give them mineral, instead of putrescent manure, on ground previously manured and in good heart.

RADISHES.—Sow seed in quick, warm soil; If insects attack the plants dust with ashes; light applications of guano promote rapid growth.

SQUASH.—These being of tropical origin will need be treated as tender plants, similar to cucumbers, as above. Manure, old and well rotted, makes the squash grow, when judiciously applied in liberal quantities.

TOMATOES.—These will not bear the least frost, and cold rains do not agree with them. If the plants in the hot-bed, or cold frame, are getting large, prick them out from the hot-bed to the cold frames, or into pots; start the roots of those in cold frames to increase stockiness, &c. Keep the plants protected nights but harden off days by giving them the open air, all reasonably pleasant days.

WM. H. WHITE.

South Windsor, Conn., 1869.

JAPANESE WHEAT.—The large variety of millet which was advertised as Japanese wheat by J. D. Rice of Detroit, Michigan, and sold at 50 cents "for enough to raise a bushel" was generally regarded as a "sell" by most of those who invested. Mr. H. W. Hill of Bridgewater, Mass., who sent for a parcel of it, was so disgusted with the appearance of his new "wheat" that he sowed only a small part of what he received. Finding that it was not wheat at all, but that it grew rank and large, with stem and leaves something like corn, he fed some of it to his cows and found that both stalk and seed were much liked by them. He has therefore saved a quantity of the seed and intends to sow a patch this season for fodder, for which purpose he think it may prove a valuable addition to our forage crops. Mr. A. D. Arms of Montpelier, Vt., judged that the straw of some that he sowed was equal to an average of four tons per acre. Mr. Hill has sent us a single head of the seed measuring ten inches and weighing full one ounce, when perfectly dry.

—It is estimated that there are 255,000 threshing machines in the United States, without counting the "school-marms."

GIRLS ON THE FARM.

FROM a correspondent we recently received a letter touching upon almost every subject that relates to the interests of farmers, in which our friend makes bold to enter within the precincts of the family itself, and with a free pen to criticise as follows. We give him a hearing, availing ourselves of an editor's privilege of commenting as freely as he writes.

He says,—"where can the young farmer find a help-mate qualified to assume and properly direct the management of the details and domestic matters of a well-regulated household? The wives and mothers of old were educated at the spinning wheel and the loom, and not at the boarding school and the piano. They were early taught to reverence their country and its institutions. Now, nothing that is not in some measure foreign to both, claims the respect of our females. They must study French and Italian, 'learn music' and embroidery, and manifest their dislike for whatever is not of foreign lands! Even among the daughters of our farmers, dress and 'polite accomplishments' are permitted to usurp the place of more useful endowments. The girl who should have remained at home to assist by her labors and presence the efforts of her mother, and under her watchful instruction, lay the foundation of future usefulness, is no sooner in her 'teens,' than she is sent off to some boarding school, or 'institute,' from which, after a brief residence, she returns to ridicule the vulgarity of rustic life, and be paraded by her misguided parents, as a 'mirror of accomplishments'—the 'bright, particular star' of the family, and

'The cynosure of every eye.'

"The influence which such a person exerts over the minds of her susceptible and uninitiated companions, whose simplicity induces them to regard her as a paragon, is highly deleterious, as it creates a disrelish and disgust for the more honorable objects of life, and elevates to the rank of virtues, those merely superficial and frivolous acquirements which are calculated to subserve no important or honorable purpose in life."

That some cause exists for such sharp criticism, we cannot deny,—and that *fashion* absorbs too much of the time and strength of women, is evident everywhere. A common expression among them, is, "We might as well be out of the world as out of fashion!" But we cannot join in any general denunciation of whatever will educate (and by that word we mean elevate) the mind and improve the manners and taste. Far otherwise! Science, literature and polite accomplishments are greatly to be desired for all. We deprecate nothing that is calculated to contribute to human usefulness, or to augment, however slightly, the sum of earthly happiness. The unamiable vanity and ambition of those who would give precedence to the superficial embellishments of society, and palm off the mere shadow of an exalted virtue as the actual substance, is simply absurd.

The most distinguished women of America have been alike distinguished for their knowledge of domestic concerns. The idea that to be "a lady," one must necessarily possess "delicate health," and macerate her form to the tenuity of a shadow, or a mere skeleton, never entered their heads. In them, the moral and domestic virtues shone pre-eminent, and love wore

——"to the lover's eye, a look of love."

They were formed by nature to foster the elements of a republic, and give new glory to the achievements of its arts and aims. This was evident in a thousand instances in the late wicked rebellion.

Why honest industry should be considered as a derogation of dignity, by any American woman with the average amount of sense, we are truly at a loss to conceive. Labor is one of the primary conditions annexed by the Eternal to our lease of life, and no less essential to our happiness, and the best development of our capacities, than the food we eat, or the air we breathe. Idleness is far from being a condition of happiness. Action is impressed upon nature as an immutable law of being. Throughout the universe, nothing is idle; mutations and permutations, embracing the revolution of worlds and the most mighty systems, as well as the simplest modifications and changes, are perpetually operating to produce specific ends.

The many painful and fatal maladies which at present number their victims among the gentler sex, are no doubt often induced by the indulgence of habits of ease and luxury to

which our mothers were happily strangers. Few young women, *comparatively*, are now bred up to domestic employments. Even in the families of our most conservative farmers, many of the common domestic duties are neglected to be taught to daughters. Thousands of young women enter the marriage state, and find the affairs of housekeeping resting upon them, which they understand about as well as how to build a ship or a sewing machine! In too many cases, their time is occupied by the guitar, piano and centre tables loaded with the flash literature of the day. If female help is wanted, recourse is had to the groups and families of recently arrived emigrants, who must receive a part of the education which daughters need, before they are fit to be intrusted with the fire in the kitchen stove,—much less with the food we are to eat. Few American girls can be had, either for love or money, who are competent to take charge of a family. In many sections, it has become nearly impossible to procure female assistance, even in cases of sickness.

There is a *cause* for this inconvenient state of things, and we think it lies principally in the want of early habits of industry, and a thorough education in the domestic duties of the family. One would not think of risking his interests with a young man practicing law, or prescribing medicine, who had not been trained to understand either of them. Is it any more reasonable to expect a young woman to discharge the duties of a housekeeper economically, or in any way acceptably, who knows little or nothing about those duties? By no means. This is the rock upon which the happiness of hundreds of families is ruined. There would be far less applications for divorce before the courts, if both parties were more thoroughly educated in the domestic duties which properly appertain to each.

But in the midst of these frequently painful inconveniences, there are thousands of young women unemployed, or living only at the starvation point, for the want of occupation. Crowded in cities, immured in garrets or cellars, half clad, tempted, not half-fed, shivering in the cold, unnoticed by the good, and ruined by the wicked. Why are they not sometimes out in God's blessed sunlight,

> ——"to breathe the breath
> Of the cowslip and primrose sweet,
> With the sky above their head,
> And the grass beneath their feet?"

Why are they not in the ten thousand pleasant homes of the land, where families are suffering for the good work which they might give, and be fed and clothed and educated for useful lives? Why, do we ask? Why? the answer is plain. It is because of the estimation in which such service is held, by those who consider themselves as occupying a more elevated and "respectable sphere." The very appellation of "housemaid" is regarded as a disgrace—a term of censure not to be endured! And so men, women and children "board" instead of keeping house, and the good old Puritan family system goes into decay, and the wailing prayer of young girls goes through the land,—

> "O! but for one short hour!
> A respite, however brief!
> No blessed leisure for love or hope,
> But only time for grief!
> A little weeping would ease my heart,
> But in their briny bed
> My tears must stop, for every drop
> Hinders needle and thread."

When will the benevolent take this matter in hand, devise some measures for the employment of these fair but hapless beings, where they will not be looked upon as in an abject condition, and relieve our cities of this foul wrong that exists in them?

WINDHAM COUNTY, VT.—The board of managers of the Agricultural Society of this county held their annual meeting in Fayetteville, Feb. 17, and after revising and increasing the premium list to about $900, appointed the several committees for awarding premiums at the next fair.

The officers of the Society are:—

President—O. S. Howard, Esq., Townsend.
Vice Presidents—Col. H. Plimpton, Newfane, Ruel Smith, Esq., Wilmington.
Secretary and Treasurer—W. A. Stedman, Fayetteville.

And a Board of nine managers.

GREEN PICKLES.—You may have green pickles without copper or other poisonous salts by merely steeping the leaves of the grape-vine or those of spinach or parsley in the vinegar. The use of earthen vessels glazed with lead should also be avoided as a solution of the acetate of lead is inevitably the result, acting as a slow poison in the system, and like the use of lead in hair-washes, lotions for the skin, lead pipe for water conduits, etc., very frequently ending in paralysis. The large pickled cucumbers imported into this country from Holland in wooden kegs are not colored green by any of these artificial means and are not only the most wholesome, but also the most palatable of any.

MAKING A POOR FARM RICH

WITHOUT MANURE.

In our notice last week of the printed transactions of the Essex County Agricultural Society we mentioned, among other valuable papers which it contained, one by Dr. James R. Nichols, of Haverhill, on concentrated manures. Having been aware of the experiments which Dr. Nichols has been conducting on a run down farm, for the purpose of testing the question whether such a farm can be *economically* restored to fertility by the use of "special fertilizers," or those outside of barn yard or stable manure," we have waited with some impatience for a statement of the results of those experiments. From his well known ability both as a chemist and as a business man we have anticipated much practical information in regard to a subject on which at present our knowledge is vague and unsatisfactory. We have had in this country no such systematic and thorough tests of concentrated fertilizers as he proposed, and as we believe has conducted on his farm during the past five years. Few men who have the ability and the means of doing so, possess the necessary perseverance and patience. Most experimenters wish to reach their conclusions and write out their reports at the end of the first season or year. But after five years, Dr. Nichols gives only a general, not a detailed, statement of his results. We are sorry to see that ill health is assigned as a reason for not embodying, in this paper, as was intended, these results and conclusions in detail. Still enough is given to excite a general desire for a more detailed report, which the Dr. intimates may soon be given through another channel of communication. It may be proper to add that the farm on which these experiments were made was purchased in 1863, and consists of about eighty acres, which is described as follows, in the essay from which we copy:—

The farm at the time of purchase was well suited to a trial of this kind, as it had been in administrators' hands for several years, and was consequently neglected and unproductive. The soil is varied in its character, with upland and lowland, a fine peat bog occupying a basin between the hills. A portion is silicious, another portion loamy with a clay subsoil, and still another part is rich in organic *debris*, a forest having until within a few years densely covered it. Perhaps no tract of land in our county presents a greater variety of soils, of differences of exposure, or affords the gradations from wet to dry, so desirable for fair experiment.

The product at the time of purchase consisted entirely of hay—about twelve tons being produced, of indifferent quality. The crops the present year upon lands embraced in the original purchase, have been 30 tons of good hay, 100 bushels of potatoes, 25 bushels of wheat, 150 bushels of corn, 75 bushels of turnips, and one and a half tons of grapes, besides other fruits in considerable quantities. There has been a steady increase in the amount of crops each year, notwithstanding a series of most unfavorable seasons. The number of acres in tillage is not far from twenty.

No stable or barnyard manures, excepting a few loads at the start, have been purchased during the five years, and the amount made upon the premises has been small; the stock consisting until within the past year of only three cows, a pig and one horse. At present the farm sustains eleven cows and heifers, three horses, a pig, and, during a part of the year, one yoke of oxen.

The fertilizing substances used (of which an accurate account has been kept, as also of crops, expenses of labor, &c.,) embrace the entire range of those agents which chemistry suggests, and those which have been brought to notice through the recommendation of farmers and experimenters—bones, ashes, lime, salt, the nitrates of potassa and soda, sulphate of ammonia, carbonate of ammonia, plaster, potashes, fish pommace, shorts, muck, horn shavings, and lastly, the refuse of the Maine lobster factories. The methods of application and the conditions under which these have been employed, the combinations produced, present details which although extremely interesting, are too extensive to enter upon in this essay.

A definite end has been kept in view—that of securing practical facts from which safe general conclusions could be reached. Of course many experiments known to be empirical have been undertaken, and the results noted. For example, a half-acre of grass-land was divided into eighteen equal parts, and eighteen different substances applied; the results were curious, but the experiment actually proved nothing, although a great difference was observable in the crops of grass. More than one-half of the experiments which we find reported from year to year, are of this nature.

The substances affording the highest satisfaction have been those which furnish in largest quantity and at the lowest rates, the great fundamentals of plant-food—phosphoric acid, lime, potash, nitrogen. These have been obtained from bones, ashes, potashes, fish pomace, and nitrate of soda, principally. Bones have been largely dissolved in acid, and true phosphate and superphosphate of lime made upon the farm premises. Bones ground and unground have been dissolved in the caustic lye of ashes, also in commercial potashes, and fertilizing substances of the most prompt and satisfactory character produced. I doubt if better crops of wheat and corn have ever been produced in the county, than have resulted from the use of these agents, upon weak lands.

I think it must be conceded that the results of these labors go to prove that exhausted soils can be brought and sustained in good tilth by concentrated chemical agents, at an expense considerably less than by the use of execrementitious manures at present market prices in the more densely populated parts of our country.

In conclusion, I will briefly present some facts regarding a special experiment upon a measured acre of hill land, dry, and exhausted from repeated croppings. It has been continued through five consecutive years.

In the autumn of 1863 it was ploughed, and in the succeeding spring dressed with 500 pounds of pure fine bone, sown broadcast, and planted with corn, a handful of home made superphosphate mixed with ground nitrate of soda, placed in each hill. One hundred and fifty-seven bushels of corn

in the ear were taken from the field in the autumn of 1864.

After the corn was removed, the land was ploughed and again dressed with 500 pounds of a compost made up of bone-dust, ashes, and refuse saltpetre, and sowed down to winter rye. The crop was 31 bushels of nice, plump grain.

The season of 1866 was exceedingly dry, and the ground became so parched that the tender grass roots were greatly injured. The crop of hay was twenty-three hundred pounds.

The next season, a top-dressing of 500 pounds of compost made of bone gelatine and muck was given it in the spring, and a crop of hay cut weighing forty-three hundred pounds. A heavy aftermath was secured this season, which was not weighed.

The present season, 1868, the crop of hay reached two and a half tons, and the field appears to be in good condition for a fine product next year.

Here we have what may be considered a fair experiment, which proves that without the use of animal excrement, a worn-out field may be brought to produce very generous crops—crops which pay a good return for the expense incurred. It proves that chemical unorganized agents are capable not only of supplying nutriment to plants for a single year, but for sustaining crops for a series of years. The fertilizing elements supplied for the five years cost a little less than thirty dollars. The experiment upon this field is not regarded as finished, and the crops will be noted until they are observed to falter.

FITCHBURG FARMERS' CLUB.

The grand annual gathering of the Fitchburg Farmers' Club took place on Monday evening, March 1, at the town hall in Fitchburg. About *four hundred* ladies and gentlemen sat down to supper, which was bountiful and excellent. The presiding officer was GEORGE E. TOWN, Esq., whose capital hits often "set the tables in a roar." After relieving the dishes of some of their viands, —which occupied about an hour,—the President introduced Dr. Loring of Salem, who spoke at considerable length in defending the avocation of the farmer against the old, stereotyped and false imputation that "farming is unprofitable." He then related some of his own experiences in reclaiming lands by draining, clearing, ploughing and subsoiling, and in adapting his animals, as to size and habits, to the soil upon which they were to be sustained.

The President then, in a very happy manner introduced ASA CLEMENT, Esq., of Dracut, President of the Middlesex North Agricultural Society and member of the State Board of Agriculture, who spoke highly of the avocation of the farmer, of his useful life, and general integrity, and gave some pretty strong contrasts between the modes of farming practiced in his boyhood and those which prevail at the present day. That great progress had been made, all could see who wished to see, and he doubted not that a still greater degree of improvement was before us.

At the close of Mr. Clement's remarks, a quartette club of gentlemen sang an appropriate song with great acceptance, Dr. JABEZ FISHER of Fitchburg presiding at the piano.

Mr. BROWN, one of the editors of the FARMER was then introduced, and read a paper upon "*The Culture and Use of Flowers.*" The Hon. ALVAH CROCKER was then called for, introduced, and made most happy and exceedingly pleasant remarks upon some of the sayings of the "master of ceremonies," "knocking into pi" the stale assertion that farming is unprofitable, and declaring his opinion that no life can be more useful than that of the intelligent, industrious and conscientious farmer. His remarks often elicited applause.

The Rev. Mr. DAVIS of Lunenburg being introduced, spoke admirably upon several matters, "driving some sharp nails clear in" to the chairman, who had personated himself as an *old* farmer, in his opening remarks, although a *young* man. Mr. CARTER of Leominster closed the speaking with some admirable hits that kept up the vivacity of the occasion until its close at eleven o'clock.

The gathering was not only a happy, but an instructive one, as many valuable experiences and suggestions were made which will continue to work in the minds of the hearers while engaged in their duties on the farm.

Few things can be more appropriate, or have a greater tendency to make rural life pleasant and to improve both mind and manner, than such gatherings as this. May they be multiplied in all our land.

For the New England Farmer.

WASHING AND BEATING BUTTER.

When I told my method of making butter, I did not intend to get any one angry, or "up in arms." Perhaps, if I had not given my experience in this difficult art, we should never have heard anything from Mrs. D., for when she saw how much I differed from her, she could not help grabbing the pen and writing what she thought. When we read anything that don't exactly correspond with our views, it is about sure to wake up our thoughts and set us to investigating, analyzing and finding out whether the things are so or not.

What is written in the FARMER is for our instruction, admonition and correction, and tends to make us more interested in everything relating to the farm.

If Mrs. D. will carefully look over what I wrote, she will observe that I laid no claims to being an accomplished butter maker. I have only taken the first degree, though I confess myself a candidate for those higher ones of "better," "best," and even the "gilt-edged," which I suppose is the highest degree known to the order. Hence I shall try to profit by the instruction and experience of others, and if possible go on to perfection.

When I spoke of keeping the cream I did not wish to be understood to say that it ought to be kept three days, but merely that it ought not to be kept over three days. Many women with large families neglect churning from press

of other work, and a number of days will slip away before they are hardly aware of it. Churning should never be neglected beyond that period; oftener is better.

Next month I expect to begin to make butter again, and I shall try Mrs. D.'s method, as I have no doubt she makes delicious butter, although I never fancied the *beating* system.

She says it is her opinion that washing destroys the "gilt-edge," spoils its flavor, and badly injures the keeping qualities of butter. All this may be true, although she gave no plain reasons to support her opinion. I was not aware that pure cold water ever injured anybody or anything; when I am convinced that it does I shall readily desist from using it, although an inveterate lover of this pure element. If the good qualities of butter are removed by water, then these peculiar properties must have a greater affinity for pure water than for the elements of the butter, and when water is applied they unite with it, and the best part of butter is carelessly thrown away by butter makers.

But is it a fact that the application or non-application of water decides the color and flavor of butter? Butter beaters affirm that such is the case, butter washers believe that these qualities depend on other circumstances. The condition and keeping of cows has something to do with it; perhaps their age has also, for I have heard old butter makers say that the cream of old cows was yellower and richer, but this may be an oldwives' fable. When cows are in a rich healthy pasture their butter is much sweeter and of a handsomer complexion than when fed on hay and roots and kept in the barn, and it is a common saying that butter made on hay will not keep well.

Butter is composed of several parts; one being a solid crystalline fat. This appears to be formed by minute grains nicely arranged in one general mass. Anything that disturbs the natural arrangement of this crystalline mass is highly injurious to the beauty and quality of the butter. Now if this is true, beating butter must be injurious, as it breaks and destroys the beautiful grains which give nice butter such a glistening appearance. The grains of new made butter are not close and compact. The application of pure cold water lowers its temperature, salt hardens the grain, and the buttermilk is naturally pressed out, mingled with the water, and thrown away. So much for the butter worker's plea.

Mrs. D. seemed to think that I was aware I had washed out the fine taste of the butter, and so applied sugar as a substitute. Perhaps I did not properly explain why I added the fine white sugar. Sugar modifies the taste of the salt. For example, mix some salt and water in a cup and on tasting it is unpleasant and disagreeable. Add a little nice sugar and the taste is then comparatively pleasant. I put sugar in the butter for the same purpose.

I might say more in defence of butter-washing, but I ear I shall get the editor, printer, and everybody else, all "up in arms." However, I hope that what has been said will stir up Mrs. D. and many other intelligent women, and provoke them to give valuable information relating to many things that smart women are interested in. MRS. TRASK.

Reading, Mass., Feb., 1869.

For the New England Farmer.

IMPROVING FARMS--USE OF MANURE.

Some little time since, I expressed some of my thoughts on the question, How can an upland farm be cultivated and the fertility of its soil be kept up. As a reason for the faith that is in me, I will tell you what I did on the farm I left when I moved here. The first year on that farm I cut over about fifty acres for a short twenty tons of hay, including a large amount of sorrel. In eight years I cut forty tons on less than one-half of the same ground. I hope many of your readers have done as well or better; if so, I would like to hear from them.

The way that I managed that farm was to break up and manure and new stock as fast as I could get manure. On old land, I ploughed the manure in; on greensward, after turning it over as well as I could. After spreading the manure as evenly as possible, I put on a cultivator and harrowed and worked it in thoroughly. I manure both spring and fall; but prefer fall, if I can get it in before cold weather.

I once put manure on the turf and turned it under, but the crops were not near as good as on land adjoining where the manure was ploughed in on old land. I have also tried spreading on old land and harrowing in. The first crop will come forward quite as fast and be perhaps as heavy, but the after crops have never with me been as good as where the manure was ploughed in. I have tried spreading on grass, or top-dressing as many call it, but I have never got more hay from three loads applied in that way than I have from one ploughed in.

One thing I am very particular about, I never draw out manure and drop it in heaps, nor spread it, until I am ready to work it in unless I am very sure of rain; in that case I spread by all means. I would about as soon leave hay in the windrow day after day, after it is fit to go into the barn, as to leave manure on the ground uncovered.

In a late FARMER Mr. Gilbert tells us how he makes manure. His way is like mine, with the exception that I use muck in my trench behind my cows in winter as well as in summer. If I ever lay another trench I shall lay it eighteen inches wide. I am now using four or five wheelbarrow loads daily, and it is hardly enough to absorb the water leaching from the manure heap.

I read very frequently of discussions on special fertilizers. I have tried them all, in a

small way, and always with the same result. I have paid, perhaps, one hundred dollars in all, for fertilizers, but I don't think that I am one dollar better off for the whole.

It is slow starting up a farm that is run so low that it will not produce more than ten or fifteen hundred pounds of hay to the acre, but I know it can be done in the way that I have pointed out; and when I cannot see an increase of produce from year to year I shall want to quit farming.

I am in the greatest want of something to manure four or more acres for corn next spring, more than I shall have; and would buy some of these fertilizers if I knew that I could get something that would do as well as others tell of doing; but it is useless to try; I have been cheated so much that I am sick of it.

If any man doubts my statements, I think I can satisfy him that I am correct if he will call on me next summer. W. S. GROW.

Westboro', Mass., Feb. 16, 1869.

For the New England Farmer.

THE FARM IN WINTER.

We have had here in Connecticut a very open, mild winter, and but little snow. When winter first set in I, for one, was not very well prepared to meet it, as owing to the scarcity of fall help, and considerable improvements made on the farm, by the way of digging a well, laying pipes, building two barns, &c., we had considerable corn to husk after Dec. 1st,—say from two to three hundred bushels. But the weather being so favorable we were enabled to secure all our corn without waste.

Since then we have devoted most of the time to feeding out what we raised the past year, so as to be able to begin the agricultural year with empty buildings for storing the next crop. Our winter stock on the farm consists of twenty cows, from which we sell the milk: about a dozen head of young cattle, mostly thoroughbred; fourteen horses and colts, several of which are brood mares with foal; five pairs young oxen, two pair of which I shall sell in the spring; a thoroughbred Ayrshire bull, "Duke of Queensbury," No. 160, A. H. Book; about one hundred good ewe sheep, mostly South Down; eight good hogs, and a large collection of various breeds of poultry.

So you will see that there is something to do to properly feed and take care of the "critters;" besides which we peddle our own milk. We have cut wood and partially got up a wood pile for the year, besides have drawn out some fifty loads of manure. When I say we, I refer to myself and two sons, one 18 and the other 15 years of age. I have no hired man this winter, but shall want two this summer.

And, now, while on the subject of hired help, I will say that to obtain a supply of good farm help is the hardest and most perplexing part of farming in this section. It is almost impossible to hire good reliable men at any price, and especially at any price which common farmers can afford to pay. Brother farmers, I appeal to you to know what we are to do to remedy this evil,—this great drawback to New England farming.

As regards the wintering of my sheep, I never had sheep winter any better, until within ten days. But recently I have lost three very valuable ewe sheep, each nearly ready to drop twin lambs. The first symptoms of disease is a disposition to stand alone from the flock, a loss of appetite, finally a slight nodding or jerking of the head and weakness in the legs. I know of no cause or cure. Will some experienced sheep man tell me how to manage them?

As to horses, will it pay to raise them here in Connecticut, within two miles of the railroad depot? What say you, Mr. Editor? If it will pay to raise horses, what style or class will pay the best? As regards milk, which will pay the best, "year in and year out," to sell the milk by peddling it, or to make a dairy and raise pork? What say you, Mr. Editor? What say you, brother farmers? What say you all? How many will answer me this question?

I am fattening my last thoroughbred Essex hog, not but that I like them very much as a breed; being quiet, easily kept and make good pork; but this community is so much opposed to black hogs that I cannot sell the pigs at home. The last pigs of this breed that I sold went to Warren County, Iowa. I want to start again on hogs, and I want to start with the best breed there is in the country, all things considered. But whatever the breed is, they must be white. Now who will tell me of the best breed of hogs in America from which to sell pigs at six to eight weeks old and to make pork of at a profit? JOHN DIMON.

Pomfret, Conn., March 1, 1869.

INTESTINAL WORMS.

It is now satisfactorily proved that the tapeworm originates from the passage into the human intestines of little bladder-like creatures (*Cystadids*), which inhabit the liver and other parts of the hog, and when abundant, cause the meat of that animal to be technically known as "measly pork." And the notorious *Trichina spiralis*, which is a very minute worm, also found in the flesh of the hog, effects an entrance into the human body in the same insiduous manner, and when in excessive numbers causes excruciating pains in the muscles, and sometimes even death. In both these cases, cooking destroys the worms, and prevents them from finding their way alive into the body of the living and breathing man, and there increasing and multiplying. But the same law prevails in all such cases as these, namely, that there is no fear whatever of any of these animals being introduced alive

into the human body, except through the dangerous and every way exceptionable practice of eating raw meat. Neither are we safe by simply abstaining altogether from pork. The flesh of wild duck, and probably that of many other animals hitherto unsuspected, and supposed to be peculiarly cleanly, may prove to be as dangerous as that of the hog, provided it be eaten raw or only partially cooked.—*American Entomologist.*

EXTRACTS AND REPLIES.

LICE ON FRUIT TREES.

I would like to inquire of you, or through your valuable paper, if lice on young fruit trees will kill the tree? If so, what is the best way to destroy them, and what time of the year is the best?

I have a young orchard that has been set eight years next spring, and they have not borne any as yet. It is set on a rich, light soil. Last spring the ground was seeded down; before that it was used for a garden for a number of years.

JAMES POLLARD.

Ludlow, Vt., March, 1869.

REMARKS.—The aphides that collect on the ends of the growing branch are sometimes called "lice," but we suppose our correspondent alludes to the much more formidable insect called the bark-louse or scale. It is described by Dr. Fitch, of New York, "as a little brown scale, one-eighth of an inch long, the shape of on oyster shell, fixed to the smooth bark, resembling a little blister. This scale is the dried remains of the body of the female, covering and protecting her eggs, from a dozen to a hundred of which lie in the cavity under each scale. These eggs hatch the latter part of May, and the young lice diffuse themselves over the bark, appearing as minute white atoms, almost invisible to the eye. They puncture the bark and suck the sap from it. The females soon fix themselves and become stationary. They die and become overspread with a substance resembling fine blue mould, which, wearing off, the little oyster-shaped scale again appears in July. They sometimes become so multiplied that the bark of the trunk and limbs is everywhere covered and crowded with them, and if the tree is weakened by borers, fire blight, or other disease, these bark-lice thus multiplying, kill it. In years past, over all the country adjacent to Lake Michigan, every apple-tree has been destroyed by this insect."

Their presence is generally considered to indicate a want of healthy action in the tree. If this is correct we should look for the causes which produce this unhealthfulness. You say the trees stand on rich, light soil, which was used for a garden. Possibly the early growth of your trees was too much forced, or the subsoil may be wet or otherwise unfavorable to a due expansion of the roots. Trees at eight years are not old enough to bear much. Sometimes a wash of strong soapsuds applied with a stiff brush such as is used for scouring floors, as soon as the weather is warmer, say in April, and repeated two or three times during the summer, will effect a change for the better in the appearance of the trees. In the *American Fruit Culturist*, by Mr. Thomas, a mixture of equal parts of tar and linseed oil applied warm, *not hot*, early in spring, is recommended. It is said this mixture does not close the pores of the bark as grease would, but it forms a varnish, which soon becomes hard, and when the tree begins to grow it cracks and peels off, carrying the bark lice with it.

Dr. Fitch, in his Treatise on Insects, mentions another remedy, which he considers very efficacious, prepared as follows:—Leaf tobacco is boiled in a strong lye until reduced to an impalpable pulp, and this is then mixed with soft soap (which has been made cold, and not boiled), the whole mixture becoming of the consistence of thin paint; this, when applied, does not easily wash from the tree, as lye, tobacco water, &c., would alone. One application with the brush to every part, will protect trees two years. A young orchard of one hundred and fifty trees, required two men a fortnight to go over every part, branch and twig, through the orchard. The trees grew thriftily, and were perfectly free from lice, while others in every direction were dying from their attacks.

MANURE AND MUCK LAND.

Can you or any of your contributors inform me, through the FARMER, what is the best dressing to be applied to muck-land which is well drained, and the mode of applying it? Is there any material which can be economically applied to such land as a substitute for manure? HILL.

Methuen, Mass., 1869.

REMARKS.—We cannot tell you what the *best* manure is for muck land that is well drained, but can strongly recommend wood ashes as the first thing which we should apply, if we could obtain them. Spread ten to fifteen bushels per acre, for two or three years in succession, and we think you will perceive a striking change in its products. Composted manures may be used with advantage, but as they cannot be spared, use superphosphate or lime or some other special fertilizer. Spread broadcast in moist weather two, three or fourh undred pounds per acre.

WHY FARMERS SHOULD WRITE.

I can subscribe most heartily to the experience and confession of a farmer in the February number of the Monthly FARMER, as to a frequent inclination to reply to or comment upon the various subjects discussed in your columns, and as to a general neglect of doing so in consequence of a constant press of other duties and of a feeling of inability. But after reading your remarks therewith, together with the lecture you gave me in your January issue, I have made up my mind to bother you occasionally. I think if we farmers will once break through the ice we shall not find it so hard to get time now and then to put a new idea or bit of experience on paper, and with the time and will, will surely come the ability. The fact is, farmers as a class do not understand each other well enough; they are greatly given to bashfulness, and diffidence, with a sprinkling of self-conceit.

They think they know it all now, and are therefore sceptical of the value and correctness of the ideas and practices of others, and are too modest to explain their own. Now let us do away with all this, shake hands all round, and get acquainted. How delightful it is to sit here by my fire these long winter evenings and have a chat with my brother farmer, living one hundred miles or more away, concerning the characteristics, profits, &c., of the different breeds of cattle, sheep and other stock; the best method of applying manure and cultivating different crops, and all the little items that go to make up a farmer's experience. Now I think, Mr. Editor, if we would take hold of this thing and pull all together you would be ready to cry "quits" very soon, (if you are not so already). But before I close, let me say that I feel thankful that we have such an excellent medium of intercourse as the FARMER. J. W. G.

Cummington, Mass., March 1, 1869.

REMARKS.—Sooner than cry "quits" to our correspondents we will increase the space in our columns, even to the doubling of the present dimensions of our sheet. So fire away, brother farmers.

MIXING ASHES, HEN MANURE AND PLASTER.

I wish to inquire through the FARMER if the mixing of ashes, hen manure and plaster together, for corn in the hill, will hinder either of the ingredients from having full effect on the corn? If so, how should they be applied?

WILLIAM ALLEN.

North Holland, Vt., Feb., 1869.

REMARKS.—Hen manure is a very rich fertilizer. It contains considerable ammonia. If you mix ashes with it, the alkali contained in the ashes will set the ammonia free, and you will lose it. If you mix plaster with the hen manure it will absorb whatever escapes from it and hold it fast. If it is desired to save the labor of going over the field more than once, these ingredients may be mixed in the morning and applied to the hill and covered up on the same day, and no loss take place. If ammonia escapes, the soil and plaster will take it up.

MAPLE SUGAR SEDIMENT.—NORWAY OATS.

The questions in your last, relative to maple sugar, can but best answered by the chemists in our Agricultural Colleges. Let sugar makers in the vicinity of them send the sap-grit or other residua of sugar to them for analysis.

The sap from my trees seems to deposit two tangible substances besides sugar. First, what is called sand; but it is not *silicious* sand at all; for when mixed with sap or water it dissolves and disappears in a moment, being taken into solution again, apparently. A friend, after chewing this substance, and then a piece of the maple, asked if the grit were not woody fibre, both tasting alike. The increase of it, toward the close of the sugar season as the weather becomes warmer, seems to show that the laboratory is more busy for summer products when helped by co-operative outside influences.

Secondly, when we make dry sugar, the pan or kettle in which the work is done becomes coated with what we call *lime*. Where much sugaring-off is done, this has to be removed, for it will scorch, and scorch the sugar above it. This substance too dissolves readily in cold or warm water. Now this may be very much the same as the grit, or a mixture of it and lime and sugar. There must be lime, I think, for where the maple stands among granite, instead of limestone rocks, there is much less of this scaly deposit. The chemist, alone, can make this all plain.

After forty years' close watching, I cannot always tell when it is a sap-day without visiting the trees. We never get sap, however, with an east wind, and but little with a south. Zephyrs appear to solicit a flow of the sweet juices with success.

The Norway oats, first grown hereabouts, are liked by some, disliked by others, and by others are considered just as good as any.

Chelsea, Vt., Feb. 22, 1869. C. N. ANDREWS.

CULTIVATION OF CELERY.

I notice in your paper of February 20, an inquiry as to the cultivation of celery. I will give my method which works well, and is about the same as that practiced in all this neighborhood;—

The seed is sown under glass about April 15. It will be from ten days to two weeks in making its appearance. By June 1, the plants will be about two inches high, and then are set one foot apart in rows six or seven feet apart, the space between the rows being occupied by onions, cabbage, cucumbers or any other low growing crop that will be off by the middle of September.

Sometime from the first to the last of September, according to the time the celery is wished to mature, the ground must be cleared of all other crops, and banking commenced. This is done by ploughing between the rows to loosen the soil, and then two men with shovels, one on each side of the row, with a boy to hold up the leaves, throw some four to six inches of earth against the plants. This operation is repeated at intervals of about two weeks until the desired height is reached.

Celery treated in this way is usually in order for market from the middle of October to Christmas. For later use, the plants would be pricked out in some moist, rich spot and left till July, then set as a second crop after potatoes, strawberries, &c., and will need but little banking, the white growth being mostly made after the plants are set in their winter bed.

Belmont, Mass., Feb. 22, 1869.

CANADA AND THE STATES.

I did not intend to accuse the FARMER of unfairness towards us, for I never saw a Canadian who read the FARMER who did not like it. Neither did I wish to be offensive myself, but if my points seem too strong, I can only say that it is my fault, perhaps, to condense too much.

Another point I might have noticed, which was a sore one in its time, to wit: the substitute business. It was the fashion a few years ago for men on your side, who made it their business, to kidnap persons on this side of the line and sell them.

We cannot influence your control of your own affairs, but we do protest against unjust and false accusations being made against us, as reasons for acts of one kind or another. We protest against such statements as Alice Carey made in the New York *Independent*, that there was as much difference observable on crossing the line "forty-five" as there was between the free and slave States. False, every word of it. We are not afraid of the truth, but we do not like to be defamed by States' people, for they are our near relatives as well as neighbors.

"The Canadian crusade against American silver," is spoken of as if this crusade were on account of its being *States'* silver. That has nothing to do with it. The difference between gold and silver is the same here that it is on your side. If it were otherwise, it would pay to buy silver here and exchange for gold there. Our bank notes are

good for their face in gold, so we have the disadvantage of two currencies; our merchants get principally silver but are obliged often to pay gold. No one pays gold or paper who can pass silver at par, as any considerable amount of silver is very inconvenient to carry on the person. Markets next time. J. G. FIELD.

Stanstead, Can., Feb. 24, 1869.

REMARKS.—It is a common remark that "one-half of the world don't know how the other half lives," and very probably it would be about as true to say that one-half of the world don't know how the other half feels. Believing it would do both halves good to have a better understanding of each other, we have presented our correspondent's views, and are glad to know that he does not hold us responsible for all that "Alice Carey" and other *Independent* scribblers may have said.

PRETTY NEAR A RIDDLE.

Capt. Joseph Weston of Skowhegan, Somerset County, Maine, was born and spent the thirty-six first years of his life in Massachusets, and for the last fifty years he has been a resident of Maine. Though not of a roving disposition, he took up his abode for a time in an unincorporated plantation; his residence was then changed to the township of Canaan, but not exactly pleased with that "promised land," his next dwelling place was in the town of Bloomfield, and finally he stuck his stakes within the limits of the euphonious Skowhegan. During these peregrinations he was a citizen of three several counties,—Lincoln, Kennebec, and Somerset, as well as of the two States of Massachusetts and Maine. And yet Mr. Weston has lived on one farm and in one house all this time! He was born in the house, built by his father in 1793, lives there still, and has never moved nor lived in any other! G. A. W.

Skowhegan, Me., March, 1869.

EARLY GOODRICH, HARRISON AND SEBEC POTATOES.

I have been much interested in the experiments of your correspondents in relation to raising potatoes. No doubt the success in obtaining large crops is attributable in a measure to extraordinary care in cultivation, yet these results would not be attained without attention being paid to the kind of potato planted. Last spring I planted on meadow land the Early Goodrich and Sebec. The latter proved a failure, while the Early Goodrich far exceeded my expectations. I planted the Early Goodrich on upland and they did equally well. I planted the Harrison for a late potato, and they gave such satisfactory results that I shall plant them almost entirely for a late crop. I selected 28 of them which filled a half bushel measure.

Methuen, Mass., March, 1869. HILL.

GOOD FENCES AND GOOD NEIGHBORS.

It is very necessary at this season of the year to be preparing to have everything go on cheerfully during the coming season. And among other good things we want good neighbors. In spending a few hours with one of my neighbors, not long since, an elderly lady asked an old gentleman what was the best thing to make good neighbors. After a moment's hesitation he replied, "keep good fences." What could he have said in so few words that would comprehend as much? It certainly saves a great deal of bitter feelings to have fences that will protect our gardens and other crops from the injuries resulting from poor fences and unruly or stray cattle. But how much more necessary is it that we should have our ears fenced, so that the stray words of the vile slanderer shall not break in and destroy the tender plants of friendship and love; and our mouth so fenced that no harsh expression shall break out to do our neighbor wrong? Don't let us forget, then, this spring, as we put up the bars and repair the fences of our fields, to build anew or strengthen those which protect the garden of the heart from the coming in and going out of those evil communications which make more trouble among neighbors than all our unruly stock. Then shall love shine from every eye and peace and good will reign in every heart. V. B.

Brookfield, Vt., March, 1869.

PREPARING LAND FOR SEEDING.

As much has been said about preparing ground for seeds, especially greensward, I thought I would give my plan: Plough from five to seven inches deep, spread on the manure evenly, take a bush, and if it is not heavy enough without, lay on a piece of board and get upon it; continue to bush it until the manure is entirely pulverized and mixed with the soil. By this time all the sods not turned under in plowing will be torn to pieces, and the ground become light and mellow. By this plan we get the benefit of the manure at once and continue to have it through the season.

E. P. LUTHER.

North Dorset, Vt., Feb. 23, 1869.

MOLASSES FOR SORE TEATS ON COWS.

I wish to obviate the trouble of obtaining the medicine suggested by John Whatmore in the FARMER for Feb. 13, 1869, for the cure of sore teats on cows, by introducing one that is its equal, and perhaps better, and one easily obtained, viz: — West India Molasses. Keep a cup of it at the barn in the season of the year when it is needed, and apply it to the teats occasionally. It is a sure preventive as well as a cure. Though simple, try it. It will be found all it is recommended.

A SUBSCRIBER.

Newport, N. H., Feb. 22, 1869.

PLAN OF A BARN.

I like the plan for a "model barn" in your Saturday's paper. As I am about building a barn, I should like to know where I can see one like that you represent in the FARMER, plans, cost, &c. I especially like this plan, because the stock is so completely separated from the hay.

Charlestown, Mass., Feb., 1869. ISAAC COOK.

REMARKS.—You can see a barn constructed on the plan of the illustration given in the FARMER, on the farm of Mr. J. H. Bent, in the village of Concord, Mass.

BLEEDING VEAL CALVES.—The Massachusetts Society for the Prevention of Cruelty to Animals give notice in the last issue of their publication, "*Our Dumb Animals*," that after the 30th of March they intend to enforce the law against the starvation and bleeding of veal calves before being slaughtered. They have been informed that, by certain butchers, "the calves are starved from Sunday night until the next Sunday night, besides being bled every twenty-four hours to stop the bleating and to whiten the 'veal.'"

AGRICULTURAL ITEMS.

—It is estimated that there are now at work in England 300 steam ploughs.

—Ward Knapp, East Lyndon, Vt., has a hen which a few days ago laid a sound egg shell, without the usual filling.

—Moses Clough of Orange, Vt., is the owner of a goose 59 years old, which has raised an average of six goslings a year for 58 years.

—The Chicago grain elevators are said to harbor 10,000 rats apiece, and it is estimated that these vermin eat $400,000 worth of grain and flour annually.

—The Annual Fair of the Addison County, Vt., Agricultural Society will be held this year, on Tuesday, Wednesday, and Thursday, Sept. 14, 15, and 16.

—A bill is before the Massachusetts legislature which requires that the constituent parts of fertilizers, with a statement of the percentage of each constituent part, shall be marked on each bag.

—The *Ohio Farmer* of February 20, says that the sheep panic in that State is subsiding, and that sheep which could not have been sold three months ago for 75 cents each, are now in demand at $1.50 to $3.00.

—The Legislature of Michigan has voted to grant the University of Michigan the sum of $15,000 annually, without any conditions, such as have hitherto been coupled with propositions to give such aid.

—The following are the officers of the Attleboro', Mass., Farmers' Club:—President, Geo. Price; Vice Presidents, S. M. Stanley, D. D., W. H. Wilcox; Secretary, J. E. Hunt; Treasurer, E. G. May; Executive Committee, G. Price, T. A. Stanley, H. Richardson.

—The following officers of the Somerset Central Me., Agricultural Society for 1869, were elected at a well attended meeting February 6th. Ex-Gov. Coburn, President; Col. Daniel Snow and Gen. Isaac Dyer, Vice Presidents; John Weston, Secretary; Wm. B. Snow, Treasurer; B. M. Hight, Horace Eaton and Warren Bussell, Trustees.

—The editor of the Marysville *Tribune* has been favored with the hind quarter of a buffalo cow, forwarded by a friend at Fort Harker, Kansas. It was cut up and parcelled out to the citizens of the village at 20 cents per pound. "The sentiment of all who were lucky enough to get a steak, was that it was rich, juicy and delicious."

—Beecher says that "the only way to exterminate the Canada thistle is to plant it for a crop and propose to make money out of it. Then worms will gnaw it, bugs will bite it, beetles will bore it, aphides will suck it, birds will peck it, heat will scorch it, rains will drown it, and mildew and blight will cover it.

—The San Francisco papers complain that the yield of wheat in California has fallen from forty bushels an acre down to twenty bushels; and that, if the present improvident style of farming continues, the crops will not average over twenty bushels an acre. The old custom of burning the stubble and straw, instead of turning it into compost, is objected to.

—The sprouts of the potato contain an alkaloid termed by chemists *solanine*, which is very poisonous if taken into the system. This does not exist in the tubers, unless they are exposed to the light and air, which sometimes occurs from the accidental removal of the earth in cultivation. A potato that shows a blackish-green tint on one side should never be cooked for the table or fed to stock.

—The most common error of men and women is that of looking for happiness somewhere outside of useful work. It has never yet been found and never will be while the world stands. Of all the miserable human beings it has been our fortune to know, they were the most wretched who had retired from useful employments, in order to enjoy themselves.

—A correspondent of the *Journal of Agriculture* in advocating proper fastenings for open barn doors and gates says that more than half the wear and tear of barn doors comes from *slamming*, and that when a boy he came very near being killed by a barn door which was closed with great force by a gust of wind. The cattle had knocked down the prop which had been placed against it when opened.

—A writer for the *Turf, Field and Farm* in suggesting that horses which herd together are oftener injured in their rough sports than in combat, remarks that the bite of the horse, even in play, is no trifle, for, from some peculiarity in the muscles of the jaws, they do not seem gifted with the facility to let go, like the dog. The jaws become locked and the piece must cut out or the teeth slip off and crack together before he again seems able to control their action.

—The *Dixie Farmer* says, all the world wears cotton, and cotton is the only thing that all the world can afford to wear. In round numbers, there is computed to be thirteen hundred millions of people in the world. Of these, it is estimated that twelve hundred and twenty-five millions wear cotton, seven hundred millions exclusively and the balance partially. Of the remaining seventy-five millions, fifty millions go naked and twenty-five millions wear skins of animals.

—The *California Farmer* of January 21, speaks quite enthusiastically of the great activity of farmers in that State. "Hill sides and hill tops to the very summit are being brought under the dominion of that *Sword of the Earth*, that divides limb from limb, and particle from particle, and prepares it for that "Baptismal Font" which shall fulfil its destiny. What would the farmers of the East say to see the furrows of our grain planters, one, two and three miles long 'straight' as an

arrow, and to see ten, twenty, forty, or one hundred sets of ploughs in our own grand valleys all at work at the same time, some single owners having forty "gang ploughs," two, four, or six ploughs each at work. Let our Eastern farmers come here and we will show them such ploughing scenes as they never *dreamed* of before."

—The *Germantown Telegraph* says that the old Montgomery County Agricultural Society, Pa., has never encouraged horse racing, and its fairs have been well-attended by the best and most respectable practical farmers in the county, and always satisfactorily sustained.

—The Australian Meat Importing Company recently gave an entertainment to a company of English working men and their wives, at which Australian meats preserved with sugar and salt was served in various forms. Though some of the dishes were rather salt, the meats differed but little from that of animals slaughtered in England.

—It is said that the government of Ontario, (Can.,) is about to undertake the experiment of draining the "Greenock Swamp," comprising some 92,000 acres. The expense is estimated at something over $241,669. On a portion of this track it will be necessary to raise the water by steam power. It is believed that after draining, the land will be worth about twice the cost of the work.

—A Detroit correspondent of the Boston *Commercial Bulletin*, says that one reason why more sheep than usual have been slaughtered the past season in Michigan is the fact that the demand for sheep to be taken West to stock new farms, heretofore amounting to many thousand a year, has ceased, and consequently this surplus must be otherwise disposed of. The writer says the farmers of Michigan to-day have all the sheep they can feed, and more than were on hand one year ago.

—Previous to the war but little India cotton was sent to Europe. But during the war one and a half million bales were sent to England alone. The sudden development of this trade had a strange effect. Fabulous fortunes were made in a few months, and gold became so plentiful as to be a positive burden. The people went crazy about cotton and neglected to grow food, until a famine brought them to their senses. The *Dixie Farmer* thinks the South may take a lesson from the experience of India.

—A correspondent of the *Maine Farmer* writes: Three years ago last spring I took up several small elms from a thick growth, (they were from two to four inches through, and from twelve to fifteen feet high,) and transplanted them. I cut the tops of the trees off, broke a piece of glass as near the size of the tree as I could, and placed on the top. I then put a piece of woolen cloth over the glass, brought it down six or eight inches over the end, and tied with woolen yarn. The sprouts started out close up to the top, and on one a sprout started within half an inch of the glass, broke through the cloth, and in two years grew eighteen inches. Every tree remained perfectly sound. I left one tree without protection, which died.

—A member of the Oneida Community writing on the importance of mulching fruit trees and plants of every kind, says, that he mulched a row of the Franconia raspberry, and also one of the Philadelphia, side by side. The effect was very marked. While the Franconias which were not mulched were literally scorched, and the leaves crumpled in the sun, the row which received the mulching, carried through nearly double the crop of fruit. The material used for mulching was old, half-decayed buckwheat straw.

—Quite extensive preparations are being made for engaging in the cultivation of silk in California. One firm in Los Angelos county is putting out 60,000 mulberry trees, as a first instalment toward making silk on a very extended scale. They have a beautiful rancho at San Gabriel Mission, nine miles above Los Angelos. They have hired forty families of Chinese, skilled silk-workers, who are engaged for four years, and will be comfortably housed in adobe cottages, with ample gardens. At the expiration of the term, each family will be entitled to a deed of ownership for its house and garden.

—The *Maine Farmer* makes honorable mention of large colts belonging to the following parties: Joseph Knowles of Belgrade, two years old last May, weight 1110 lbs.; M. A. Goodrich of Bingham, two years old last June, weight 1100 lbs.; H. B. Knight, Hollis Centre, a "Gideon" colt, three years old, 16¼ hands high, weight 1250 lbs.; Chas. Shaw, Dexter, one year old last June, good bay color, weight 1145 lbs. The sire and dam of this last mentioned colt were both raised in Woodstock, N. B., and are of Clydsdale and Messenger blood, and superior work horses. The sire, now five years old, weighs 1300 lbs., and the dam, still owned by Mr. Shaw, also weighs 1300 lbs.—a clean limbed, good styled animal.

Horse Racing at the West.—At the recent Iowa Agricultural Convention, all the speakers but one objected to the continuance of the turf tests. They could not see the use of paying $300 or $400 to owners of horses that were good for nothing but racing. The State Board changed the premium list for 1869 so as to exclude all horses that have ever "gone for money."

The Illinois State Board at its late meeting, adhered to its resolution of last year, prohibiting racing under the rules of the track.

The Michigan State Agricultural Society at its late annual meeting discussed the prohibition of racing at Agricultural Fairs, and left the matter in the hands of the Board of Managers of the several county societies.

PLANTING THE SEED.

HAVING prepared the soil and provided the necessary conditions for the growth of the plant, the next step is the planting of the seed, and this is a matter of no small importance. The best seeds must be selected. Plant only such as are plump and well ripened and pure. It is a waste of labor and soil to plant imperfect, shrivelled and foul seeds. Many seeds require some preparation for the soil. Wheat should be prepared by soaking in brine, solutions of copperas or saltpetre. Put the grain into a sufficient quantity of the solution to cover it; then stir it, and skim off all seeds that float upon the surface. Thus you will remove most of the weed seeds and imperfect grains. After soaking a proper time, pour off the liquid and dry the grain by mixing it with a sufficient quantity of plaster or ashes.

The drill is now generally admitted to be the best means of putting in wheat. It requires less seed, and puts it in the proper depth. In the autumn, if the land is in a suitable state, there is little danger of putting it in too deep. In the spring, especially if the soil is wet, there is danger that it may fail to germinate if put in too deeply.

Corn, too, should be prepared in the same way, as a security against worms and birds. Soaking in a solution of copperas is probably the best thing for corn. Some prefer a little tar dissolved in hot water. The corn should be put into this and stirred briskly, the water drained off and plaster mixed with it until the kernels no longer adhere together. Either of these preparations secure the grains from the worms, and seem to be offensive to the birds, and pay well for the trouble of applying them.

Corn should never be planted till the ground is dry and warm. If planted in cold, wet ground it will come up, if it come up at all, yellow and spindling, and will be slow in taking on a thrifty growth. It had better be planted late than in a soil in an unsuitable state. There is often much complaint that sweet corn will not come up. This is owing to the fact that much of it is not well ripened. Sweet corn for seed should be gathered early, and hung up in tresses in the sun, and remain exposed to the sun until it is thoroughly dried. It should be lightly covered in a dry, warm soil. If it is planted too deeply in a cold soil, much of it will rot before it germinates. Sweet corn contains but little oil. It takes in water rapidly, and when there is not sufficient heat in the soil it is apt to decay. Good management will often save the vexation of failure.

Garden seeds often fail from being covered too deeply in the soil. As a general rule, it may be said that the small seeds require a very light covering. The larger seeds, as peas and beans, may be covered more deeply. Many flower seeds fail to germinate from too deep planting. We should learn wisdom from the processes of nature. The seeds that drop from the pods of flower stalks, and from weeds and grasses receive but very slight covering or none at all, and a sufficient number of them germinate. Beet and mangold seeds often fail to germinate from being planted too deeply. Many suppose the beet seed to be a large seed; but the seed as we see it is merely a burr or pod, each compartment of which contains a very small seed. Every gardener knows that several plants often spring from what is called one beet seed. This is because the burr contains several distinct seeds. Beet seeds should be soaked a day or two in water and then covered very lightly in a warm, mellow soil. Beet seed we think should be planted on ridges made by back-furrowing two furrows together. The ridge should then be flattened by a light roller and the seed planted on this at regular intervals, and slightly covered. The seeds of tomatoes, lettuce, cabbage, parsnips and onions should be covered very lightly. The ground in which the two latter are sowed should be made very fine, and after the seeds are sown should be flattened with the spade or a board, or what is better with a light roller. This prevents the soil from becoming too dry before the seeds germinate. If parsnip and onion seeds are soaked for a day in water and then dried with powdered soot, or with plaster, they will be more sure to germinate.

Much of the grass seed fails to germinate from being covered too deeply. When sowed with grain, the grain should be sowed and the harrowing completed; then the grass seed should be sowed and followed with the roller or brush harrow. Either of these simple implements will give it all the covering it needs. Clover seed may be sowed before a rain, or upon the snow in the spring. Sowed in this way, it will generally catch better than when worked in with the harrow. When sowed in the early fall without grain, a light harrow or the brush will cover grass seed to a sufficient depth. We would always roll the ground if possible, before sowing grass seed. It is then deposited more evenly upon the surface, and the brush or harrow covers it more evenly and uniformly.

Many farmers may think that these minute directions are mere trifling, and of no importance, but every skilful gardener knows that his success often depends essentially upon his attention to them. Attention to little things often leads to great results and the neglect of them to great losses.

USE THE ROLLER.

Some three or four years ago we recommended the use of the roller in the spring upon ground that had been seeded in the previous autumn to grain or grass, and stated that it would prevent to a great extent, the effects of what is called winter killing. On heavy soil thus seeded down, the water freezes in the surface and throws out many of the roots of the grain and grass. These exposed to the sun and wind soon dry up and perish. Sometimes we see a large part of the plants on considerable patches of a field thus thrown out, and the consequence is an almost entire loss of the crop. If the roller is thoroughly applied to fields in this condition as soon as the frost is out of the ground, these roots will be pressed into the ground, and most of them will grow again. If a few bushels of ashes, or two or three hundred pounds of plaster to the acre are spread before the roller is applied, it will be all the better.

We are reminded of our remarks upon this subject by some very sensible and timely words in a recent number of the *Western Rural*, in which the writer advises the use of the harrow, followed by the roller, where winter wheat has been thrown out by the frost. This is a difficulty to which wheat culture on the prairies is very subject. The fierce winds which prevail there also carry off the soil, leaving the roots of the grain exposed, so that plants are often found hanging by only one or two roots to the ground. In all such cases he advises the use of a sharp harrow, to be followed immediately by the roller, as soon in the spring as the ground will bear the team, without "mashing." He says, "do not be afraid if you see a few plants clinging to the harrow teeth. The roller will bury them in the soil, and they will take root like transplanted cabbages." He gives his experience with this practice for the past eight years, and says there will be great need of it in his section the present spring.

Now we may be thought extravagant, but we have no doubt that the faithful use of the roller last spring on the fields sown broadcast to winter wheat would have increased the crop of last year several millions of bushels. Probably it would have made up the estimated deficiency of fifteen millions from the year before.

Where the drill or plough was used to cover in the wheat, the roller will not be as much needed in the spring, because the roots will not be as badly thrown out as in broadcast sowing. But it may be often used to advantage even here, especially when grass seed is sown with wheat, as the roller leaves the surface smoother and better fitted for the mowing machine and rake.

Farmers throughout the country are coming to the conclusion that better methods of wheat culture must be adopted if they would save the great "bread crop" from utter deterioration and ruin; and the use of the roller in the spring is a useful expedient that may be safely resorted to, so long as broadcast sowing is practiced. When the time comes in which we shall speak of *planting* wheat and shall cease to use the term *sowing* altogether, we shall use the hoe and cultivator, instead of the roller.

A CITY MERCHANT AS A FARMER.

Many of our readers will remember a little notice published last summer of the farming operations in Shrewsbury, Mass., of our friend Joab Hapgood, whose name was so long connected with the gun store at No. 15 Washington street.

The change from a Boston store to a country farm is so great that we had the curiosity to inquire what had been his four years' experience, not on his physical health, as his ruddy countenance was a sufficient index of that, but on his agricultural enthusiasm, and farming expectations. We were glad to find that he is as enthusiastic as ever, and as ready to talk of cultivation, crops, and profits as when he turned his back on Washington street.

His land being at no great distance from Worcester, his operations take the form somewhat of market gardening, though he still adheres to field cultivation, raising both corn and hay. His corn field this year produced at the rate of sixty-eight bushels per measured acre. His yellow corn is a cross of the Webster and Parker varieties—8 rows and large kernels, of which 140 selected and about 160 average ears produce a bushel of shelled corn. He showed us a tress of twelve ears which weighed

five pounds and eight ounces, and measured from eleven to twelve inches in length. He spreads fifteen loads of about 30 bushels each of manure upon the land, and some ten or twelve loads in the hill. He also showed us a specimen of a very early variety, which he said was fit for boiling in nine weeks after planting, which was done the past year on the 9th of June. This is a white or buff-colored variety, eight-rowed with shorter ears, and though good for cooking is not a "sweet corn." He obtained the seed in Rockport, Mass., and says that he has increased the original size of the ears about one-third by cultivation. He is now hybridizing it with a larger variety. Specimens of both these varieties may be seen at the seed store of Hovey & Co., Boston.

We also made some inquiry as to his manner of feeding his cows which are the only horned stock that he keeps. He thinks much of corn stover. Winters two cows on the husks and stalks of an acre of corn, and the clover hay from another acre of land. His stalks are run through a hay-cutter, and for a feed he fills the one-half of a flour barrel sawed in the middle, wets them with cold water and adds a quart of shorts and a little salt to the mess for each cow. Such a feed is given night and morning. At noon the cows have dry hay or stalks. From each half barrel mess of cut corn stover his cows reject as orts from one to four quarts of the hardest stalks. This keeps his cows in good order; one of them at this time being in fair condition for the butcher.

His farm keeps his hands and his mind busy. In the study of nature as her powers are displayed in hybridization, in the various processes of growth, maturity and reproduction of crops and animals, he never tires. Every season, every day brings something new, and he has no desire for the pleasures and amusements of city life.

NEW PUBLICATIONS.

ON THE CATTLE PLAGUE: or, Contagious Typhus in horned Cattle: Its History, Origin, Description, and Treatment. By H. Bourguignon, Doctor of the Faculté de Paris, Fellow of the Society de Medicine de Paris; Laureate of the Institute of France, Member of the Legion of Honor, etc. Philadelphia: J. B. Lippincott & Co.; London: J. Churchill & Sons; Boston: Lee & Shepard. 1869.

As indicated by the title page, this work is divided into four parts: the first contains the history of this typhus from the remotest times down to the present day; the second part gives a description of the disease; the third gives some plain instructions for the benefit of farmers, cattle-dealers, and dairymen; and the fourth part treats of the scientific means and safeguards to be adopted to prevent in future such a state of helpless panic as England fell into on the late appearance of the disease in that country.

The author objects to the use of the word "Plague" as borrowed from the gloomy vocabulary of the middle ages, and as tending to perpetuate or cover up popular ignorance, and says the common habit of confining our observations of disease to the phenomena which strikes the eyes, instead of fixing them on the general causes by which these phenomena have been produced, leads to misapprehension both as to the nature and treatment of cattle complaints. Believing that the disorder—rinderpest, plague, or ox-typhus—which was so fatal to the herds of England is the same as that which has prevailed in Europe from the earliest times, even from the days of Homer and Plutarch, he censures the indifference which is manifested in one country to the fact of the existence in another country of this or other fearful historic "epizooty." He regards the quarantine measures that are frequently adopted on the approach of diseases as of little avail, for the real plague, typhus and cholera may be borne along by the winds of heaven, and pass over the longest distances and the highest obstacles. He does not believe, as some contend, that the "ox typhus" as he prefers to call the Cattle Plague, is owing to any peculiar organization of cattle in those sections to which its origin has generally been traced, but to the climate and circumstances in which they are reared, and to the effects of the hardships to which they are exposed in their transportation to market. In relation to the climate, &c., of the banks of the Volga, Don and Dnieper rivers in Russia, and the Danube in Hungary, Mr. Bourguignon, says:—

In those countries which are damp, argillaceous, and swampy, and which are inundated by the overflows of their lakes and rivers, or by the reflux of the sea, there is deposited a slimy or brackish water, which a temporary torrid heat afterwards causes to ferment; and then a superabundance of life, a teeming vegetation, springs up in all directions. In the midst of this swarming vitality live and thrive an infinity of worms, maggots, animalculæ, insects, mollusca, fish, reptiles, birds, &c.; and here, too, all these creatures die and decay, when this slime, the prolific source of generations which we might look upon as spontaneous, begins to dry up and disintegrate. Then from these organic vegetable and animal matters, in a state of decomposition, escape those deleterious gases, such as hydrogen, carbonic oxide, nitrogen, carbonic acid, sulphuretted hydrogen, and even phosphoretted hydrogen.

Often to all these causes of infection are added myriads of grasshoppers, which cover the ground, where they die, aggravating the mass of pestiferous vapor which fills the atmosphere. Finally, the water which slakes the thirst of the herds of cattle is corrupted; the plants on which they feed distil poisons; the air, the water, and the plants, carry within them a principle of venom and death. After this, how can we be surprised if this flood of putrid emanations is transformed into a contagious typhic virus, whose subtle and pestilential effluvia are conveyed by the ox to considerable distances?

In relation to the power of man and of different animals to resist the causes which produce contagious diseases, the author states a theory which is new to us. He says:—

"It is an important fact, which deserves our most pointed attention and consideration, that the vital resistance inherent in the animal frame to withstand the attacks of these contagious diseases, is very far from being the same throughout the

whole kind. Man, in this respect, is the most favored and best fortified; he is able, without much degenerating, to inhabit any latitude, to go with a sort of impunity, if his calling require him to do so, amidst the most pestilential emanations, and to continue for hours inhaling their baneful fumes. We could quote many striking examples of this resisting power in man.

Next to man with respect to this power of vital resistance come the omniverous animals, or those that eat both flesh and vegetables; then the carniverous, or those that eat flesh only; and last of all, the hervivorous, or those that subsist on vegetables, in which this faculty is very feeble indeed. If this theory is correct, if sheep, cattle and horses offer a much weaker resistance to the causes which generate infectious and epizootic diseases than other animals it should certainly be understood by farmers. The author of this work says:—

All vegetables and animals, with the exception of *adult* men, whenever their health declines from any cause (but more particularly from paucity of food), spontaneously generate microscopic parasites, or very minute insects, the germs of which are inherent in their system. A flock of fleecy animals, wasted by deficient food in dry and parched meadows, becomes attacked in due time by a parasitical cutaneous disease, known as the *itch*, which is enough, if not checked, to destroy the whole. Now, all that is required is to remove this flock to a more fertile soil, where there is plenty to feed them, and the disease will disappear of itself without any treatment. Deficiency of food destroys the health of animals, and abundance of food overcomes disease in them.

We selected six healthy sheep, which we kept well supplied with provisions; we covered these healthy sheep with parasites (acari). On every one of these sound, well fed sheep, the microscopic animalculæ died off without generating the cutaneous disease; for the blood, the humors, and the skin of sound and healthy sheep constitute a soil unfavorable to the propagation of these parasites, and actually starve them to death.

After this first experiment, we subjected these six sheep to a deficient diet; they grew lean, their blood was impoverished, and then all we had to do was to lay upon them not thousands and thousands of these parasites—as we had done in the first instance—but one solitary female in a state of fecundity; and the parasitical distemper unfolded itself so fiercely as to cause the death of three of these sheep on which the test was allowed to run its course; whilst the other three sheep, having been restored in time to a recoverable condition just as they were about to drop off, were thoroughly cured, without any special treatment, by the sole influence of good food and ordinary hygenic attention.

We have copied these few extracts from the first part of the book, not by way of a review of the work, but simply as illustrative of the author's mode of treating his subject. We regard the work as a very valuable addition to books on cattle disease. It contains many facts and suggestions that may have a bearing on questions connected with the Texas disease.

—Warren Percival, of Vassalborough, Me., has a herd of 56 pure blood Durham cattle. His farm is celebrated for the production of fine breeds of cattle, hogs and sheep.

For the New England Farmer.

WHEAT MATTERS.

As your correspondent, Wm. R. Putnam of Danvers, says he took the wheat fever from reading my articles, and as he bought some seed wheat of me, I was much interested by his statements, and regret that his experience in wheat culture should have been so unfavorable. Still I am pleased to learn that he raised twenty bushels from the single one he obtained at Andover, which was certainly a splendid crop. About the same time Hon. Levi Bartlett of Warner, N. H., purchased seed of me and for eleven years he had only two partial failures. But, Mr. Putnam tells us, the next year not only his wheat rusted, but his hopes were also blasted! Was this brave? Have his potatoes never rotted? Have his apple and other fruit trees always produced a large yield? How has it been with his pastures, his meadows, his oats, his rye, his beets, his turnips, his onions, his cows, his horses, his pigs—are all these uniformly productive, uniformly healthy? If not, has he abandoned them all? Are rust and blight, maggot and fly, drought and flood, potent for evil to the wheat crop alone? Had I failed the *second* instead of the *sixth* year in the cultivation of wheat, when the rust reduced my harvest to twelve bushels per acre, I might possibly have been discouraged, and, like friend Putnam, have concluded that it was cheaper to buy flour than to raise wheat. But thirty years ago the varieties of winter and spring wheat —especially of the latter—were less in number and inferior in quality to those we now have.

Mr. P. says "it costs me twice as much to raise my wheat as it does other crops and buy wheat." Some New Hampshire farmers once said to me, "we raise oats and buy our flour. We get forty bushels per acre and sell them for eighty cents per bushel, and pay $18 a barrel for flour." My answer was, land that will give forty bushels of oats will give twenty-five bushels of wheat. Flour at $18 is equal to $4 a bushel for wheat. The oats give $32 per acre; the wheat $100. They were "astonished at the doctrine," and with one accord said "we will raise our wheat," believing that wheat is a safer crops than oats in a series of ten years, which is undeniably true.

The further answers that I would put in, appear in the FARMER of Feb. 13, simultaneously with Mr. P.'s article, in the excellent and practical communications of Jacob Fuller, Esq., East Wallingford, Vt., and from "J.," Oak Hill, N. Y. I need no better indorsers. I thank these gentlemen for their timely rescue, and would urge farmers to read these communications for themselves.

With myself it has been a *Vicksburg fight* from the beginning, and I hope the powder will hold out till the victory is secured. Sometimes an editorial "remark" may show a little

weakness, or a failure may now and then be reported, yet the FARMER and other New England papers teem from week to week with statements showing most encouraging success and unabated confidence and hope in wheat planting. Why then be nervous and fidgetty at a little "rust" that may occur once in five or six years, which may generally be avoided, if the grain is brined, ashed, and limed, and planted on high, rolling localities, early in spring or the last of summer, that it may head off the hot sun and sweating vapors of "dog days."

Is it too much to say that wheat raising should be the great enterprise of the New England States to-day? The labor of digging and housing an acre of potatoes, say five days for one man, is at about the same cost as the ploughing, sowing and harvesting of an acre of wheat. This crop is cheaply made. We hope the farmers, *one and all*, will put in their spring wheat early on the high warm lands, and not forget their winter wheat the last of next August to the first of September. Fallow with clover, if manure is short, or turn in the mowing sward and sow on that, which gives the largest yield where there is no manure. Strong descending grass land is best for winter grain. HENRY POOR.

Brooklyn, L. I., Feb. 15. 1869.

For the New England Farmer.

CANADA STOCK AND RECIPROCITY.

An article in the FARMER written by a correspondent at Stanstead, Province of Quebec, complaining that Canada is misrepresented or not understood in the States, reminded me of a little incident that occurred at the Brighton market last October. While looking about the yards and talking with various individuals and drovers, I mentioned the subject of Canada cattle, and inquired if there were any in the yards that week. A gentleman replied that there were a few, and seemed anxious to show them to me. But what was my surprise, on being shown some of the poorest kind of French Canadian stock, once called Alderney, but so degenerated by breeding in and in that they have become so small that they are not much larger than some of our Cotswold sheep. I found that the Brighton people thought them to be a fair specimen of Canada stock. I certainly felt a little chagrined, as no doubt many of our farmers in this vicinity would, under like circumstances. I found that Canada was regarded a cold, frosty place, and that such cattle were considered a fair representation of the stock of such a country.

Well, I must admit that our French Canadians do raise poor stock in many places, because, as their fathers did, so do they. Inhabiting as they do the richest portions of our country, they ought to be foremost in trying to improve their stock; but it is much with them in regard to stock-raising, as it was with their old "*traineau*," where the horse went in the middle of the road, which they could not be persuaded to give up until a law was made forbidding their use.

The cattle I saw at Brighton are bought cheap and are preferred by speculators and drovers from your country to choice stock, because they can make money on the purchase.

I would just say that in the counties of Compton, Stanstead, and Shefford there are as fine and good breeds of cattle as can be found in New England, or perhaps in any of the United States. Accompanying this I send you an account taken from the Burlington *Free Press*, of a visit to Hillhurst Farm, Compton, P. Q., M. H. Cochrane, proprietor, which I hope you will see fit to publish in the FARMER at some future time. We feel proud of such a man as Mr. Cochrane, as he once was a poor boy and worked out from place to place for his living. His success is the result of persevering industry and honesty, and I hope many of our boys will imitate his example.

I see that some of your writers are afraid of free trade with Canada. The abrogation of the Reciprocity treaty, they contend, has been of vast benefit to the public chest or revenue. This may be so; still I think if a good reciprocal law could be made by the two nations and do away with that numerous class of officers maintained by both governments for a space of 1500 miles, for the purpose of enforcing the present law, a better state of feeling would exist, and the increase of trade would balance all the profits arising from the duties now paid by each government. We are not inclined to whine because your people will not favor a reciprocal law. We have shrewd men among us, good water power, and we may become a manufacturing community. Lumber of all kinds has advanced since the abrogation of the Reciprocity Treaty, and your purchasers and builders feel the effects very much. H. FRENCH.

Eaton, Compton Co., P. Q., Feb., 1869.

REMARKS.—We have published several notices of Mr. Cochrane's stock, and should be pleased to print the article referred to, but our correspondents, just now, claim the lion's share of our columns. Our idea of "free trade" and of "reciprocity" is not realized by any "treaty" which offers our markets to one portion of our neighbors on more favorable conditions than those which are imposed on our own citizens, or on our other neighbors.

For the New England Farmer.

CAN WE RAISE WHEAT IN NEW ENGLAND?

Having read in some of the last issues of the FARMER, some advice on the above subject, I venture to say a word and give my experience in the matter. Two years ago next

month, I had a nice smooth field containing five acres of rich sandy loam, about sixty or seventy feet above the bed of the third branch of White river, on which my farm is situated, and inclining to the north east. The spring before, I had broken this field, planted it to corn, manuring in the hill at the rate of about eight cords to the acre, and had a good crop of about fifty bushels to the acre. The spring of 1867, I ploughed this piece nicely, procured the best seed I could find, and sowed it to wheat the last days of April. After ploughing I spread about seven cords of clear sheep manure on the poorest parts to make the piece as even as possible, and seeded with two and a half bushels berdsgrass and forty pounds clover seed. About the first of June I spread a light coat of leached ashes on the whole piece. On account of heavy showers just before the grain was ripe, it could not be cradled, but it was mowed and saved with much care, not shelling at all. It was threshed with a machine soon after and not exposed to waste by threshing or otherwise, and the yield was sixty-four bushels of inferior quality.

Now I am sure that this crop was not as profitable to me as oats would have been, but perhaps what I lost in that crop I have, and shall gain in the grass crops from the same piece. Last year the two crops were estimated at over three tons to the acre.

This is the best wheat land I have, and it seems to me that if I should follow Mr. Baker's advice of February 27, it would not pay me very well "to sow wheat where I raise corn the year before, without regard to the location of the piece." S.

West Randolph, Vt., March 1, 1869.

For the New England Farmer.

SUGAR MAKING.

With most of the recommendations suggested by the members of the Westminster, Vt., Farmers' Club, in the report of their discussion of this subject recently printed in the FARMER, I am well pleased, while there are a few which I cannot approve. Mr. N. G. Pierce says, he prefers the wooden spouts, with a bit of half inch, boring three inches deep. He thinks the amount of sap drawn from the tree depends more upon the depth of the hole than on its size. Though but a boy, I have made sugar every spring since I was large enough to do so, and I find that I get just as much sap by boring ¾ inch deep as by boring three or four inches deep. I believe no tree should be bored more than one inch in depth, if the perpetuity of the orchard is desired. I prefer a three-eighths bit and wooden spouts. Pare off the rough bark bore ¾ inch deep, and drive a nail just below the spout and hang on the bucket.

Mr. O. Peck says two spouts will run as much again as one, and if the tree is of good size you may put two, three or four buckets to a tree. I have always noticed where we have bored two holes, say from six to eight inches apart, using two spouts and one bucket, we get no more sap during the season than we should from one spout. If the tree is of good size we may tap twice, using two spouts and two buckets. Spouts should fit in the bark and not in the wood.

Perhaps a description of some of the arches in use here will interest sugar makers in other sections. In some cases, they are built of the right length and breadth for the number of kettles or size of pans used. For kettles, they are three feet high; for pans, about two. The back end is built plain the same as the sides—the chimney being on the left hand front corner. Then through the middle of the arch, lengthwise, is laid a tier of bricks as high as the sides, and extending from the end to within one foot and a half of the back, and the left hand of the front being bricked up. In the half of the arch next the chimney, stones are raised so as to throw the blaze against the bottom of the kettle.

Another way which is very good, is to build the arch about three feet high, and of a length and breadth according to the number of kettles you set. The kettles should be set in a line one after the other; the chimney being upon the further end. With arches properly built after either of these plans a great saving of wood is effected, and this is becoming with us an object of much importance. In the first plan the fire travels back on the opposite side of the division, instead of blazing up into the air, as I have often seen it, through chimneys of good height.

Another convenient arrangement is to have the sap-holder a little higher than the top of the arch, so that by the use of a piece of pipe and a stop cock the sap may flow continuously into the evaporator, but so slowly as not to check the boiling as is done when a bucketful of cold sap is poured in. A. C., JR.

Bethel, Me., March 8, 1869.

ADVICE TO DAIRYMEN.

At the recent meeting of the Illinois and Wisconsin Dairymen's Association, Mr. Willard of New York, said some excellent things. Among them were the following:—

In the matter of securing fine flavor in both butter and cheese, some points have been entirely overlooked in previous discussions. It is only recently that the true causes influencing the flavor of dairy products have attracted our attention. And among these the question of clean, pure water for stock, has not been sufficiently appreciated. Milk contains 87 per cent. of water, and it would hardly seem reasonable to expect that the animals could overstep the laws of nature and manufacture good milk from stagnant water; yet, such has been the case, and because manufacturers have not

been able to make a good product out of such milk, they have been blamed. With all our knowledge and experience in New York we have not been able the past year to obviate having some bad-flavored cheese during the hot weather, especially the July cheese. I took some pains to study this question, and I found by examining farms in numerous instances that stagnant putrid water was one of the leading causes. There were other causes, but this one was invariable. In one instance the cause was attributed to the milk of one of the patrons whose cows had been drinking from frog ponds. This man changed his fences so as to get good water, and so the trouble ceased. In the private dairies of New York and England, particular attention is paid to this matter. On farms where springs are deficient, the defect is to be overcome by digging a well and applying wind-power for pumping, which can be inexpensively erected and are durable. It is the best plan to have the water pumped up into a tank, and so arranged that it can run back into the well after it has stood a short time, as this will prevent its becoming contaminated by foul gases.

Another point on which the old dairy farmers are in error, in which is the cause of great impurities in milk, is the bad construction of milking stables, most of them little better than pest houses, owing to bad ventilation. So bad are some of them that I have seen delicate women faint away in them in hot weather. Follow the milk which comes from these places to the factory, after having been confined in the can under a close fitting cover and you will find it most offensive in odor and putrid. If there is any manufacturer present who can make clean flavored goods from such milk I should like to see him and hear his process. In this respect the English farms are ahead of ours. Their milking stables are open on one side, cool and well ventilated and milking made a pleasure to animal and milkmaid. But I must say the new dairy districts are in advance of the old in this respect. The West may get ahead of the East yet, as every thing is new there, there are no prejudices to counteract.

I have said dairy farming promised to be remunerative and enduring. The statement needs modification. It *does not promise* to be remunerative to those who make a poor or inferior product. It is also ruinous to the dealer. I have watched the history of failures among provision merchants, and it is the poor stuff in the end that breaks the camel's back. After you have provided a clean, well ventilated milking stable, let each milker take a pail of water and towel into the stable, wash the cow's udder and wipe it dry with the towel, and then proceed to milk; you will then have no filth dropping into the pail, and water is so cooling and grateful to the animal, that she is quieted, gives down the milk at once, and will yield enough more during the season to pay the whole cost of milking. It is an inhuman practice to cut the cow's tail to get it out of the way of the milker; by means of a rubber band it may be fastened to and unloosed from the cow's leg.

SHERIDAN'S RIDE.

In his Essay on Horses, read before the Vermont State Agricultural Society, Mr. L. T. Tucker repeated the following very appropriate lines:—

Up from the south at break of day,
Bringing to Winchester fresh dismay,
The affrighted air with a shudder bore,
Like a herald in hast, to the chieftain's door
The terrible grumble and rumble and roar,
Telling the battle was on once more
And Sheridan twenty miles away.

And louder still those billows of war
Thundered along the horizon's bar,
And louder yet into Winchester rolled
The roar of that red sea uncontrolled,
Making the blood of the listener cold,
As he thought of the stake in that fiery fray
And Sheridan twenty miles away.

But there is a road from Winchester town,
A good broad highway leading down,
And there through the flash of the morning's light
A steed as black as the steeds of night
Was seen to pass as with eagle's flight.
As if he knew the terrible need,
He stretched away with his utmost speed;
Hills rose and fell, but his heart was gay
With Sheridan fifteen miles away.

Still sprung from those swift hoofs thundering south,
The dust like smoke from the cannon's mouth,
Or the trail of a comet sweeping faster and faster,
Foreboding to traitors the doom of disaster.
The heart of the steed and the heart of the master
Were beating like prisoners assaulting their walls,
Impatient to be where the battle field calls,
Every nerve of the charger was strained to full play
With Sheridan only ten miles away.

Under his spurning feet the road
Like an arrowy Alpine river flowed,
And the landscape fled away behind
Like an ocean flying before the wind,
And the steed, like a bark fed with furnace ire,
Swept on with his wild eye full of fire.
But lo! he is nearing his heart's desire,
He is smelling the smoke of the roaring fray
With Sheridan only five miles away.

The first that the General saw were the groups
Of stragglers, and then the retreating troops.
What was done! What to do,—a glance told him both
Then striking his spurs, with a terrible oath
He dashed down the lines 'mid a storm of huzzas,
And the wave of retreat was checked there, because
The sight of the master compelled it to pause.

With foam and with dust the black charger was gray
By the flash of his eye and the red nostrils play
He seemed to the whole great army to say,—
I have brought you Sheridan all the way
From Winchester down to save the day;
Hurrah! Hurrah! for Sheridan,
Hurrah! Hurrah! for horse and man.

And when their statues are placed on high
Under the dome of the Union sky,
The American soldier's temple of fame,
There with the glorious General's name
Be it said in letters both bold and bright,
Here is the steed that saved the day
By carrying Sheridan into the fight
From Winchester, twenty miles away.

—Chicago shipped seventy-eight bushels of wheat in 1838. The amount shipped in 1868 was upward of 40,000,000 bushels.

EXTRACTS AND REPLIES.

WHITE WASHING SHINGLES.

I wish to lay several thousand shingles next spring. I intend to whitewash them either before or after laying them. How will it do to fill a molasses Logshead with fresh sawed fir shingles, and pour in lime-water enough to cover them? Should the lime-water be as thick as common whitewash? Should it be warm? Will two or three hours' soaking be sufficient? E.

Paris, Me, Feb. 1, 1869.

REMARKS.—Lime in the shape of whitewash has been applied to shingles in various ways. Mr. Ed. Emerson of Hollis, Mass., informs us that he sometimes soaks his shingles in thin whitewash, at others he applies the whitewash to the shingles as laid on the roof. He lines with red chalk, then whitewashes the course last laid down to the line, and after the building is shingled he whitewashes the whole roof. From much experience he believes it makes the shingles last twice as long as when not whitewashed. He puts nails not over two inches apart, and does not drive them so as to sink the head, but leaves them so that the heads of the nails may hold up the buts of the next row of shingles sufficiently to allow the circulation of air. The late Dr. Brown of Wilmington, Mass., prepared sap shingles by throwing them into a large kettle in which the whitewash was kept boiling, where they were kept a few minutes and then thrown out to dry. A roof thus covered was in good order at the time he wrote, twenty-five years after the shingles were put on, and he then added, "it may do for years to come." The addition of salt has been recommended by some, but to this it has been objected by others that the salt causes the nails to rust off.

FRUIT ON A HILL FARM.

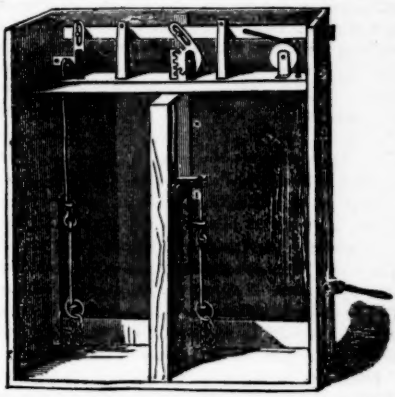
Here on the hill farms of Vermont we do not expect to compete with the orchards of Massachusetts or the valley of the Connecticut in raising fine fruit. On the contrary so general is the impression that our climate and position are unfavorable to its growth that but little attention is given to orcharuing. Some sixteen years ago, I determined to make a little experiment in this line on my hill farm, but was so fearful of being laughed at by my neighbors for engaging in fancy farming that I procured my trees and set them out "on the sly." I fenced off a little rocky, and rather bleak spot near my buildings and set out some 150 trees quite near together. Compared with those set in richer and more sheltered locations my trees have made a small growth. But considering the amount of land occupied and the labor expended, I have been very well satisfied with their product. For the purpose of encouraging young farmers on the hill farms of this and other New England States to attempt to raise at least a few apples for their own use, I will give them the following statement of the products of my orchard for the past year.

Merchantable Apples sold	$110.00
Reserved for family use	40.00
Cider	8.00
Hay	15 00
Fall Feed	4.00
	$177.00

Reading, Vt., March, 1869. J. P.

WINSLOW'S SAFETY CATTLE TIE.

Calamities like that which recently occurred in Burlington, Vt., where by the burning of his barn, Mr. W. R. Vilas lost about one hundred and forty animals, should induce farmers to adopt some



measures for the greater safety of their stock. The above cut is an illustration of a plan devised by Mr. C. P. Winslow, of Westboro', Mass., to release all the cattle in a stable by one movement of a lever outside of the barn. It appears to be simple and practicable, and we hope it may obviate the objections which have prevented the general introduction of other forms of combination stanchions and ties that have heretofore been offered to the public.

BLACK LEG IN CALVES.

I lost five calves last fall by a disease called the "black-leg." When taken, the calves are rather stupid, walk stiff, refuse all food, breathing becomes labored; they show a disposition to lie down a considerable portion of the time; are costive, and appear to be in great pain. Some are very much bloated, and when dead, the blood settles on the back and neck and in the legs. The best calves usually take the disease and die. What I want to know is, what the disease is, and what is a remedy? E. P. LUTHER.

North Dorset, Vt., March, 1869.

REMARKS.—The disease is an ugly one, a sort of murrain or epidemic among cattle. It is known by various names, as *black-leg, black quarter, quarter-ill, joint-murrain, blood-striking, &c.* Some veterinarians suppose it to be an inflammatory fever; but under whatever name it may go, it is a bad disease, and one that requires great care on the part of those who have anything to do with it. We can hardly look upon it as a *fever*, because some cattle of all ages and conditions actually have it. Youatt says that young stock, and those that are thriving most rapidly, are its chief victims. He adds:—

"Often without any indications of previous illness, the animal is found with his neck extended; his head brought, as much as he can affect it, into a horizontal position; the eyes protruding and red; the muzzle dry; the nostrils expanded; the breath hot; the root of the horn considerably so; the

mouth partly open; the tongue enlarged, or apparently so; the pulse full, hard, and from 65 to 70; the breathing quickened and laborious; the flanks violently heaving, and the animal moaning in a low and peculiar way."

Sometimes the animal is in the full possession of his senses, but usually appears unconscious of things about him; will stand for an hour or two without moving, and when moving, staggers. The disease does not always appear in the same place. Sometimes the first symptoms are tenderness on the loins and back, swellings about the shoulders, with a peculiar crackling noise, and there is great sensitiveness to the touch. In another animal the disease may appear in hard, scurvy patches of what seems to be dead skin. These ulcers first appear about the belly, the quarters and the teats, but spread everywhere. There will also be several other exceedingly offensive symptoms. The conjestion is everywhere. This is called *black-quarter*. The disease is most prevalent among young stock, and is most frequent in the spring and fall of the year.

These symptoms will be sufficiently plain, we think, to lead to a proper conclusion as to what the disease is when they are present.

Now what is the remedy? Some practitioners resort to the most heroic bleeding and purging. This does not seem to us to be the best course, and we therefore give the treatment prescribed by Dr. Dadd in his work on the *Diseases of Cattle*. He commences the treatment thus:—

Spirits of Hartshorn	4 drachms,
Tar-water	1 quart,
Tincture of Bloodroot	1 ounce.

"Mix the hartshorn and tar-water first; then add the bloodroot. Drench (dose No. 1).

"The object in giving the hartshorn is to decarbonize the blood, and impart healthy, stimulus to the nutrient system of blood-vessels and nerves; and this agent will do it.

"Should the animal show any lameness in the back or hind-quarters, apply the following:—

Oil of cedar	2 ounces,
Sulphuric ether	2 ounces,
Tincture of capsicum	1 ounce,
Cod liver oil	6 ounces.

"First, mix the two oils; then add the other, and shake them thoroughly; lastly add the tincture.

"The object in applying this preparation is to arouse capillary attraction, and thus prevent the engorgements, which, according to the best authorities, are everywhere found.

"Four hours after administering "dose No. 1," drench the patient with the following:—

Liquid tar	1 ounce,
Glycerine	4 ounces,
Thin gruel	1 quart.

"This dose may be repeated at intervals of four hours, until symptoms of improvement are observed.

"The tar is a powerful antiseptic, and prevents decomposition and mortification.

"All sores and ulcers must be dressed with pyroligneous acid, and kept constantly sprinkled with powdered bloodroot; abscesses punctured with a thumb lancet, syringed with soapsuds, and their cavities crammed with fine salt. Wash sores about the mouth with liquid tar. If the patient be weak, give goldenseal in two drachm doses, mixed with the food."

We have thus gone at considerable length into this case, because the disease is a terrible one, and if once gaining a foothold, may spread through a wide region, and result in great disappointment and heavy loss. We have made all the inquiry, and searched all the books at our command, and have given such a description of symptoms as cannot be mistaken, and remedies which are sanctioned by high authorities.

We suppose the doses prescribed above may be intended for grown cattle; if so, the practitioner must vary them according to the age of the animal treated.

SUPPOSED OVARIAN TUMOR.

In the winter of 1867, Mr. Daniel Griffin, of Starks, Me., lost a cow under the following circumstances. In the summer and early autumn she began to fill up, and her body became so heavy and cumbersome, that it was with great difficulty that she could ascend a hill, or even gently rising ground. She continued to grow worse, that is, larger and heavier, until she came to the barn, when she could hardly walk. She was hearty, eat anything given her, and had the appearance of being heavy with calf, and was so considered by all who saw her. In a short time, however, she became so heavy that she could not stand, and was obliged to lie down all the time. She very soon died, apparently without any suffering, and was in good flesh, and hearty to the last. Upon being opened, a large sack, said to have been of the size of a forty-gallon cask, rolled out, apparently wholly unattached. Upon opening this, it had a honeycomb appearance, the cells being filled with a watery substance. It was estimated to weigh about 300 pounds. It might have been attached while growing, and the supposition is that it was; but no such connection was observed. All the other organs appeared to be in a healthy condition. Mr. G. and many of his neighbors are anxious to learn the name and nature, as well as cause of this phenomenon. ZEN.

Starks, Me., Jan. 23, 1869.

REMARKS.—This was probably a case of ovarian tumor. The attachment was to one of the ovaries, by a small neck, which might have been ruptured before death, or when the sack "rolled out."

It is very desirable that in all cases of unusual forms of disease, farmers would call on veterinary surgeons, or in their absense upon educated physicians in their vicinity, to examine and report upon them. We have no doubt that most physicians would cheerfully do the service.

PRESERVING MAPLE SYRUP.—BUTTER CASKS.

Two years ago I procured several gallon jugs of common stone ware and filled them full of syrup made from the first flow of sap, weighing ten and a half pounds to the gallon; corked them tight and packed them in sawdust from seasoned timber, and put them in a cool, dry place. The result was we had this luxury for table use during the year, with all the nice flavor of freshly made syrup.

This success in preserving syrup led me to try another experiment with butter. Farmers who are accustomed to keep their butter on hand after the weather has become so warm as to make it difficult to forward it to market, have found much difficulty in keeping casks in which butter is packed from mildew, occasioned by moisture condensing on the outside of the cask. For two years, I have procured shavings of seasoned wood from a planing machine or turning lathe, and packed my casks as fast as filled, with the butter in them, so as to keep them from the air. When taken out in the fall my casks are clean and nice. Care should be taken to keep the barrels, or whatever is used to pack in, from contact with the ground or anything moist.

E. F. SHERMAN.

East Dover, Vt., Feb. 10, 1869.

CULTIVATION OF PEAS.—SAWDUST FOR BEDDING.

I see in a late number of the FARMER that "An Old Subscriber" wishes to know if peas will do to sow alone. They are raised here very extensively, as we get a better crop of wheat after peas than any other crop we put in, and more sure than a summer fallow. Our soil is clay loam and black muck. Sow two bushels per acre the last of March or first of April, cut enough for seed and turn the hogs in the last of July and let them harvest them, during which they fat very fast.

I wish to inquire through the FARMER if it will pay to haul oak sawdust one mile to litter the stable to absorb the liquid, or will it be likely to sour the land if too much is put on. I know it pays as far as the stock is concerned, for it keeps them as clean and nice as though they were out at pasture.

Hudson, Mich., Feb. 15, 1869. L. M. BRIGGS.

REMARKS.—On our hungry New England soils sawdust compost works well. We have used it ourselves to a limited extent; and some of our correspondents have used it largely. Mr. B. F. Kinney used 100 cords in nine months. There is danger of its fire-fanging. After trying various plans Mr. K. found it best to let it remain in as solid a body as possible until he drew it out, putting on water enough to keep it from heating too much. In the field he put it in flat heaps, two or three cords in a heap, and a foot thick after it was well trodden down. Mr. J. Cross said, "I have used sawdust for bedding for ten years, and would not be without it if I could obtain it by going four miles for it."

DISEASE IN TURKEYS

I have for many years been a raiser of turkeys, and until within four or five years, have been successful; since that time my turkeys have been affected with what I term a liver complaint. They first refuse to eat, then become stupid, lag behind the flock, their excrement very yellow and watery, and in about ten days they die. I have never known but one to fully recover. This year I had forty-five hatched out and raised but six; most of them died of this complaint. On examination, I find the liver enlarged, and covered with white blisters. I have bought them in New Hampshire, grown and fattened thirty-six miles from here, and they would die of this complaint. Can any of your readers give a remedy? DAVID KIMBALL.

Bradford, Mass., Feb. 23, 1869.

REMARKS.—We are sorry to hear of any trouble among the turkeys, as they help us so much in our Thanksgivings. We suspect they obtain something on the premises which acts as a poison upon them, and especially as apparently healthy turkeys from a distance are affected in the same way when brought to the premises of the writer. Are your neighbors similarly affected?

A PRINCIPLE IN BREEDING.

I believe that most of our cows are spoiled at the start, for breeding. Many farmers have their heifers come in late, and they couple them with anything that will bring them in milk. I think it all important that the first should be the best they can find, if the cow is to be kept for stock or for the dairy. WILLIAM F. LOOMIS.

Langdon, N. H., Feb., 1869.

REMARKS.—We agree with you that the *"first"* should be the *best* of its kind. The strong probability is that the *first* impregnation has an influence on the subsequent progeny of the cow; or at any rate, just as likely to prevail as anything that follows. So if you employ a diseased and badly-formed animal as a sire, you would scarcely expect anything different, as a certainty. Like begets like. We have neglected this matter too long in all our stock, and especially so in the case of horses, where only one in ten is of good form, is sound and has a fair power of endurance. Scatter your views among your neighbors, and the farmyards about you will appear better in a few years.

A DISEASED CALF.

I have a last years' calf that recently appeared to itch badly; so much so, that she licked the hair off her sides and back of the shoulders, and became a perfect scab. I did everything I could think of to heal it, and am obliged to keep her in the stancheons to prevent her tearing the hide off. There is no appearance of lice, but from her ears to her shoulder is a perfect scab. Can you tell what it is or what to do for it? I have raised many calves and am at a loss to account for this, unless she had too much cotton seed meal when young. A SUBSCRIBER.

Providence, R. I., Feb. 20, 1869.

REMARKS.—Will you apply a saturated solution of carbolic acid, one ounce in a pint of water, apply once a day with a soft sponge, and see the effect? If the disease is what is called *mange*, the scab or scurf will be yellow, somewhat resembling corn meal; the hair will become loose, the eyes dim, the appetite poor, and the countenance languid. Mange is a contagious disease.

PARIS GOLD MEDALS FOR MOWING MACHINES.

Will you please inform me through the columns of your paper what mower did really win the gold medal prize at the Paris Exposition? By so doing you will confer a great favor on the writer and the community at large, as we often see circulars and advertisements of different mowing machines claiming to have won the gold medal.

Lancaster, Mass., Jan. 9, 1869. JOHN LOVELL.

REMARKS.—A somewhat detailed statement of the first day's trial of mowers at the Paris Exposition, written by a correspondent of the *Prairie Farmer*, who was an eye witness, was published in the weekly FARMER for July 13, 1867, and at page 399 of the MONTHLY for that year. Nineteen different machines were entered for competition.

At the close of this day's trial only eight machines were named by the judges for a further trial,—the Wood machine being No. 1, the McCormick No. 2, and the Perry No. 3, all American machines. On the final decision Gold Medals were awarded to Walter A. Wood, of Hoosac Falls, N. Y., and to C. H. McCormick, of Chicago, Ill., and a Bronze Medal to J. G. Perry, of Kingston, R. I., for mowing machines. A list of the principal prizes and medals awarded to exhibitors from New England was published in the weekly FARMER of July 6, 1867.

WHITE PINES FOR WIND-BREAKS.

I thank you for your kind assurance that the ashes I placed around my apple trees will do them no harm, and as I feel interested in, and wish to do what I can for my young orchard, I have been thinking I would, for the purpose of forming a protection, place a belt of some kind of trees on the north, and would like to know whether White Pines would answer the purpose, and if so, when will be the proper season to transplant them.

Bristol Co., Mass., Jan. 19, 1869. G. R.

REMARKS.—White Pines are easily transplanted, grow rapidly, are hardy, and will subserve an excellent purpose as a shelter. Two rows are better than one, the back row to face the openings in the front row. You will find capital examples on the line of the railroad between Boston and Providence, where they are placed to prevent drifts from blocking the road. Transplant the last of May, just as the young growth of the branches appear. Dig up the sod with the roots, and not allow the latter to come to sun or wind. The trees must be kept thick at the bottom, and in order to secure this they must be headed down. If this is neglected, the leading stem will shoot into the air, throw out lateral branches, and the lower limbs will die and drop off.

ROSENDALE CEMENT—STEAMING FOOD FOR STOCK.

Can you or some of your readers give information with regard to the Rosendale cement,—such as is used in laying bricks in the Hoosac Tunnel? I am preparing to construct a water-tight cellar, and want the best cement to lay the bricks in. I understand that the Rosendale cement hardens under water, and grows solid with the lapse of time. If so, it is what I and many other farmers want. Where is it manufactured, and of what materials, and where to be had, and what the cost per cask or hundred? And the cost of common cement, per cask, in Boston?

Can you or your correspondents give us more information about steaming food for stock? Some of the members of our club are intending to put in steam works another fall. Will those of your subscribers, who are engaged in steaming food for stock, give us the desired information? If there are any objections, let us have them. There is no question at the present time, that is occupying the attention of the farmer, of more importance than that of feeding stock. P. C. TRUE.

Pittsfield, N. H., Feb. 17, 1869.

REMARKS.—The Rosendale cement is sold at retail for $3 25 per cask, and can probably be purchased of any dealer in cements, as it is in common use in most country villages.

With regard to steaming food for stock, we know of no well authenticated experiments made in this country. Many experiments have been made, but not with sufficient accuracy to justify their being quoted as reliable data. We usually give in the columns of the FARMER, all that seems to be of value on this subject; shall continue to do so, and hope for more light from some of the members of your club.

POULTRY ACCOUNT.

I have figured up my poultry account to the first of January, and send to you for publication if you choose. The account began December 1, 1867, and ends January 1, 1869. At the commencement there were forty-six hens and four roosters; six hen turkeys and one cock; nine geese and seven ganders, and about thirty pigeons. On the first of January, 1869, the stock consisted of fifty-six hens and four roosters; ten turkeys and one gobbler; nine geese and six ganders, and twenty-five pigeons. Therefore there should be credited to the poultry about $15 or $20 more. I have charged the poultry with everything fed to them, except the sour milk from one cow, and about six bushels of small potatoes. On the other hand, no account has been made of the eggs used in a family of three,—perhaps twenty-five dozen. The poultry was all sold at Faneuil Hall Market, Boston, and mostly to D. A. Dunbar and Nathan Robbins.

1867-8	*Poultry.*	*Dr.*	
To 107 bushel	Meal	$134 97	
" 29 "	Oats	28 40	
" 18 "	Corn	116 69	
" 5 "	Buckwheat	10 27	
" 11 "	Cracked Corn	15 34	
" 15½ lbs.	Bone	46	
" 150 "	Scraps	4 87	
" 7 doz.	Eggs	2 70	
"	Picking	2 30	
"	Sulphur	10	
			$316 14

1867-8	*Poultry.*	*Cr.*	
By 90 pairs	Chickens	$260 72	
" 149¾ lbs.	"	51 00	
" 485 "	Geese	117 16	
" 405 "	Turkey	126 70	
" 49 "	Squabs	12 67	
" 66 "	Fowls	22 13	
" 27¼ "	Hen Feathers	4 95	
" 15 "	Goose Feathers	7 15	
" 374 doz.	Hen's Eggs	129 22	
			$731 70
	Profit		$415 56

Taunton, Mass., Jan. 26, 1869 SPECIALTY.

WHEAT OR OATS ON HARD, ROCKY LAND?

Can you or any of your subscribers tell which will do best on hard, rocky, burnt ground, wheat or oats? I saw an account of two brothers in Maine, raising potatoes and beans on burnt ground. I would like to know their method of preparing the ground, and also of planting. J. B.

Troy, N. H., Feb. 7, 1869.

REMARKS.—We should think either of them would grow nearly to perfection, on such land, where a heavy growth had been cut off and considerable of it burnt on the ground. We know nothing of the mode of culture adopted by the "Maine brothers," but should think potatoes would flourish exceedingly on such land wherever it could be made mellow enough to get the seed in and well covered over. We have planted potatoes on newly burned land, after what we called the Indian fashion. A heavy home-made hoe was

struck into the ground at an angle of about forty-five degrees, the turf raised sufficiently to slip a potato under it and back of the hoe, which was then withdrawn, and the "hill" stamped with it in the usual manner. A fair crop of very clean and nice potatoes was the result.

SUGAR MILLET.

In a late issue of the FARMER I noticed a recommendation by Dr. Loring of sugar millet as green food for cows during the dry season. Doubtless many of your readers are entirely unacquainted with the cultivation of this article, who realize the importance of something of the kind to carry cows through the season of short pasture. Will you have the kindness to give all necessary information on the subject, with price of seed, and where obtained? P. X.

Guildhall, Vt., March, 1869.

REMARKS—There are many varieties of millet. They all belong to the family of the Panic grasses. The two varieties that are chiefly cultivated in this country for forage, are the common millet, *Panicum Miliaceum*; and the Hungarian grass, *Panicum Germanicum*. They both yield large crops of grass that are excellent for soiling or for hay. Millet requires a rich, rather moist soil, which should be free from weeds, as the plants at first are small and grow very slowly, and are apt to be choked by weeds on old ground that has not been kept clean. It is not an early crop, but is one of great value. We know of no variety called "sugar millet." We presume that Dr. L. would be happy to answer any inquiries upon the subject. Millet seed costs about $2.50 per bushel. When sown for fodder about half a bushel per acre is generally used, and about twelve quarts when sown for seed. It is sown the last of May or first of June. It is cured much like clover. It is an annual, and must be sown, like oats, corn, &c., every year.

TREATMENT OF DRY, SANDY LOAM LAND.

I have a piece of dry, sandy loam land on which I raised about seventeen bushels of corn to the acre last year. I want to get it into mowing. It is too far off to cart barn manure to it, if I had it to spare. How would it do to put on about a barrel of ammoniated guano, or Bradley's superphosphate of lime to the acre, and cultivate it in without ploughing, and sow buckwheat about the first of June; then plough under and sow winter rye and clover to plough under with the stubble after the rye comes off?

Would you advise to sow winter wheat and hay seed, or seed without any grain? Would I be likely to get rye enough to pay for my labor and hay enough to pay for cutting for two or three years? S. A.

Chatham, Mass., Feb., 1869.

REMARKS.—We certainly recommend to plough the land, for that, in itself, is equal to a moderate manuring. The rest of your plan is not a bad one, but would it not be a *better* one to omit the rye? You would get three months' growth of clover to plough under by the first of September, when the wheat and grass seed ought to be put in. Then put in wheat, timothy, and red top grass seed, and it seems to us that you would have a fair foundation for good crops. Sow clover seed early in the following April. Any lands may be reclaimed in a manner similar to this; even poor, sandy, plain lands, that have produced scarcely anything but a few straggling blackberry vines and stools of "Everlasting white." It is a slow mode of fertilizing poor lands, but it can be done without taking a shovelful of manure upon them.

SAWDUST FOR BEDDING.

I wish to inquire through the FARMER if any one has ever used sawdust (from the seashore) for bedding for stock, and if so, whether its value will warrant one in drawing it eight or nine miles.

Biddeford, Me., Feb. 25, 1869. J. W. R.

REMARKS.—It will depend very much upon circumstances. If you have an unoccupied team, and can occasionally spend half a day without interfering with regular farm work, we think it will pay for drawing it eight or nine miles. It is worth something in the first place, because the cattle and horses lie easier upon it than upon bare plank; and whatever tends to the comfort of the cattle, makes them more productive in one way or another. It is worth much as an absorbent in the stalls, and is valuable in the soil in two ways:—first, by taking there what manurial agent it has absorbed, and secondly by its mechanical action as a divider in compact or heavy soils.

THE "BISHOP" BREED OF HOGS

In reply to John Dimon, in the FARMER of March 13th, in regard to the best breed of hogs for raising pigs for sale and making pork, I will say that I think we have the best breed here, all things considered, called the "Bishop" breed. They are all white, small bones, with very thin rind, easily fattened, and make very large, handsome hogs. The following are the weights of ten killed here last fall, varying from twelve to eighteen months old, that were kept till within about two months of killing, on raw stuff and slop from the house, and the remainder of the time on boiled potatoes and meal,—viz. 400, 400, 450, 450, 465, 470, 500, 510, 560, and 625 pounds,—average 483 pounds. Pigs could be obtained in this neighborhood some time in May. H. M. B.

Curtis Corner, Me., March 15, 1869.

REMARKS.—We are sorry our correspondent did not give some account of the origin of the "Bishop breed," as nearly every one interested in the subject will naturally desire information on this point.

HOGS IN ORCHARDS.

I have thought for several years that a barn cellar reeking with offensive gases was not the best place to keep hogs through the hot weather. I have made pens under shady apple trees, and have enjoyed seeing my swine on fresh earth and breathing pure air.

Last summer I went a step further and enclosed half an acre of apple orchard. My object was two-fold. I wanted the range and exercise for the swine, and I longed to see them root up and extirpate the witch grass, which I could not kill by any common means.

One old Sachem among the four turned in soon tried his tusks upon the tender bark of one of the apple trees. I put on coal tar. This this the hogs

rubbed off upon their bodies, which made them look unsightly. So I washed all the trees exposed with whitewash, and had no more trouble.

It would have done you good to see the hogs root over that half acre. They did it again and again. They found worms and roots in the soil, seemed to enjoy their explorations marvellously. The lot was kept clean of every green thing all summer, on the surface, while the trees put on the deepest green and made wood rapidly. A part of the orchard was Hubbardston Nonesuch trees. These bore. I was proud of the apples. They were the finest I ever saw—large and high colored.

After the apples began to fall considerably I shut the hogs into a smaller space. This they rooted over often and deep, so that I was not obliged to cart in any earth all summer to keep the manure covered. They only required wood shavings, which I believe in supplying copiously, not to produce fire-fang, but to absorb liquids and provide a comfortable bed.

My experiment was so satisfactory that I have prepared materials to enclose a larger lot the coming season. If such treatment won't wake up all the apple trees they are past hope.

Call next summer, if you can, and see ploughing done without horses. WM. D. BROWN.

Concord, Mass., Feb., 1869.

AGRICULTURAL MATTERS IN MAINE.

At present people in this section appear to be more interested in political than in agricultural reading; almost every family having one or even two political papers, while a majority take no agricultural publication of any kind. The great inquiry is for political and light literature. Take for instance the town of Skowhegan, containing about sixty square miles and not less than 600 families—nearly every one of which takes one or more papers, and reads them carefully. Even those residing at a distance from the post-office will harness up and ride perhaps miles for their weekly paper. Yet some of these same men will refuse an agricultural paper because they live "so far from the post-office,"—and, in fact, for all these 600 families only about 125 agricultural papers are received at this office.

But this indifference to agricultural papers is not the worst part of it. We find not unfrequently a decided prejudice against them, based on the assumption that they are edited by men who have little practical knowledge of farming, but who recommend theories which are impracticable to the common farmer. But if agricultural papers impart no knowledge of practical use to the farmer, of what practical use is the knowledge obtained from his political paper? The men who conduct them care little for the interests of the farmer farther than to secure his vote. To do this, statements and appeals are often made which array one neighbor against another, and engender strife among those whose interests are one. Why shall we run after these fellows and neglect our own interests? The mechanic has his *Scientific American*, the lawyer his Acts and Resolves, his Law Reports, &c., the doctor his Medical Depositories and text books, and they patronize them liberally, because each obtains valuable information from them. Would you employ a physician who fails to keep up with the improvements and discoveries in the healing art, or the lawyer who pays no regard to the progress of legislation and legal decisions. From a somewhat careful observation among farmers, I find the best farmers, if not farms, best stock, largest and best crops, and in fact, a more thrifty farming community in every particular, where agricultural papers are liberally patronized than where few are taken. Our agricultural publications should meet those wants of the farmer which are met in the case of the mechanic, the lawyer, the commercial man, and the physician by those devoted to the interests of their respective professions.

Farmers here have paid some attention of late to wheat growing, but the weevil and rust are discouraging many. Though there is some good stock in this section there is not as much interest taken in its improvement as in some parts of the State. Potatoes have been the leading staple, but as only about fifty cents per bushel are now offered for them, many farmers are feeding them to their stock, as all kinds of marketable animals now command good prices. In good times potatoes have been drawn fifty miles to this market. The farmers here are generally "well off" and able to keep their products for a higher market, to sell at a lower figure if necessary, or to feed them to their stock. ZEN.

Skowhegan, Me., Feb. 27, 1869.

USE OF SALT MEADOW MUD.

Can you give information respecting the value of salt meadow mud for a fertilizer? Also, best manner of preparing and using the same, and oblige S. CHAPMAN.

East Dennis, Mass., 1869.

REMARKS.—We have repeatedly inquired of persons living on the sea coast, or those having salt water creeks penetrating into their farms, whether the salt meadow mud is useful as a fertilizer? The usual reply has been—"I do not like it." We do not know of any well conducted experiments made with it, and wish some of our correspondents would give us information on the subject.

FEEDING HAY AND STRAW.

Going into "winter quarters" this season with an insufficient supply of hay, and being minus the wherewithal to purchase more, I adopted the practice of thoroughly mixing hay and straw, and with the exception of a small foddering of corn buts in the middle of the day, have given my cows nothing else. The greatest benefit resulting from this practice to me, is, I have learned a lesson of economy. Oat straw which I have hitherto regarded as worthless, or nearly so, as feed for stock, I am persuaded can be used with profit in the manner above described. True, it costs labor; and no person should attempt it who is not willing to give time and patience to the work. That word *thoroughly* must be rendered emphatic to fully understand the practice I have pursued. B. G.

North Montpelier, Vt., March, 9, 1869.

DISEASE AMONG SHEEP.

Can the editors or the readers of the FARMER give me any information as to the disease which is very fatal among sheep in this section? I have lost within six weeks about one-fifth of my flock, and some of my neighbors have suffered to nearly the same extent. Some of my best sheep are taken. They soon become weak about the hind legs, unable to stand, and die. On opening them I find a yellowish, globular substance under the skin, also about the kidneys, and a large mass of it at the large end of the heart. This substance might perhaps be better described by the word jelly. In fact it appears to pervade the whole carcass. It is found about the legs, and under the skin of the head and back of the eyes a mass equal to a large spoonful has been observed. The heart is much flattened away, and contains a little frothy fluid. Some of them have a large quantity, say two or three quarts of water not much colored among the entrails, and between them and the film which

encloses them. The kidneys appear to be in their natural state, with the exception of this jelly-like, yellowish substance about them. The liver is nearly black and very tender or rotten. It is not spotted, nor are there many ulcers in it. The gall is small. The lungs appear healthy. The bowels do not adhere, but this yellowish substance is found about them, and also about the paunch, in large quantities.

My flock came from Salisbury, about thirty miles south of Plymouth, some twelve years ago, and no other sheep have been put with my flock. My young sheep are kept at one barn, and the older ones at another barn, separated by a highway. A stream of water passes through the yard in which my young sheep are kept, and with these the disease has been most fatal. The other flock has access to water at a little distance. The pastures in this section are hilly and dry. Many of my young sheep have become thin in flesh.

F. A. C. NICHOLS.

Plymouth, N. H., March 15, 1869.

REMARKS. — Some of the above mentioned symptoms correspond with Mr. Youatt's description of a disease known in England as the Rot, while others do not. Dr. Randall says he has never witnessed an instance of this disease in the United States. We venture no opinion as to the name or treatment of the disease among our correspondent's sheep, but hope some of the readers of the FARMER may be able to do so.

A SICK COW.

I am a constant reader of the FARMER, but never have seen anything among your "Extracts and Replies" relative to a case I have of a cow. Nearly a year ago she commenced being lame in her hind legs; apparently healthy otherwise; no soreness appearing anywhere; a contraction of the cords seemed to be the trouble, and when walking, she scarcely will raise her hind feet from the ground, and a snapping noise is distinctly heard. Will you or the readers and correspondents of your paper inform me of the cause and remedy?

Randolph, Vt., Feb. 1869. E. H., 2d.

REMARKS.—We cannot form any definite opinion without a careful examination of the animal. It may be rheumatism, or it may be paralysis. You had better consult some veterinary surgeon.

PEDIGREE.

I have a question to ask you. I have a heifer and I wish to find her grade. Her mother, which was from a full-bred Jersey cow, and half Jersey and half Ayrshire bull, was taken to full-bred Jersey bull, the result being my heifer. What grade of the Jersey is she? I took her last year to a full bred Jersey bull; and what grade is her calf? A MONTHLY SUBSCRIBER.

Blackstone, Mass., Feb., 1869.

REMARKS.—Your cow is three-fourths, your heifer seven-eighths, and her calf fifteen-sixteenths Jersey.

KICKING AND STEPPING COWS.

Having seen considerable in the FARMER lately about milking kicking cows, I will give my method which has been successful when everything else has failed. Take a strap two or three feet long, pass it round the hind legs above the gambrels, crossing it between the legs and buckle it tight. The beauty of this arrangement is, it does not worry or tire a cow while she stands still, but she finds it very inconvenient to do anything else. I always break my heifers to milk in this way, and never have kicking cows, neither will they keep stepping while being milked. J. W. G.

Cummington, Mass., March 1, 1869.

SICK PIGS.

Tell J. C. Miller, of Fort Kent, Me., whose pigs are troubled with a swelling of the hip, and are lame all over, to rub their issues on the inside of the fore legs with a cob and soft soap, and I will warrant a cure. E. K.

Bennington Centre, Vt., March 2, 1869.

WORMS IN HORSES.

The best remedy for worms in horses I ever tried is to give them plenty of poplar poles to gnaw at their leisure. The greasing process amounts to nothing with me. L. H. D.

Cornish, N. H., Feb. 1, 1869.

AGRICULTURAL ITEMS.

—A man in Launceston, England, recently lost his life by the sting of a bee on the jugular vein. Faintness came over him and he died within half an hour.

—A couple of red squirrels stole from the barn of Mr. Bixby, a farmer in South Reading, Windsor County, Vt., sixty bushels of corn, which they had stowed away in the barn loft.

—In England and France, dried fern leaves are used extensively for packing fresh fruit, grapes especially; they seem to possess, to an unusual degree, the property of preserving vegetable and even animal substances for a long time.

—The present class of scholars in the Industrial College at Orono, Me., now numbers seventeen, the average ages of the pupils being eighteen years. Of the number, ten are sons of farmers or have been bred to farm work.

—A correspondent of the *Rural New Yorker* says cattle can be fed in winter, on hay, for as many cents per day as the hay is worth dollars per ton. He thinks five sheep will eat as much as a full grown steer. Such estimates are, of course, very far from being exact.

—The farm occupied by Mr. Hyde, near Alton, Ill., consists of 400 acres: 100 acres of which are fruit planted as follows: 2000 apple trees, 3000 pear trees (of which 2300 are standard,) 1500 peach trees and ground prepared for 1000 more in spring, 500 cherry trees, 3000 grapevines, one acre of Lawton blackberries, 600 gooseberry bushes, 600 currants. The farm is intended exclusively for growing fruit.

—The *Maine Farmer* notices the following crops of wheat raised in that State last year. Mr. Forrest L. Stewart, of Corinna, raised fifteen bushels from half an acre of land and one bushel sowing, variety the "Lost Nation." (?) Joel Prescott, Esq., of Northport, raised twenty-six bushels of nice wheat from one acre. Mr. J. S. Morrill, of Albion, raised fifty bushels from two acres. He

says he has raised *not less* than seventy bushels of corn to the acre for several years past, and was very successful the past year in drill planting.

—The *Maine Farmer* says that Mr. O. B. Churchill, of North Parsonsfield, recently sold a pair of two-years-old steers, six feet two inches in girth, to Mr. John M. Ames, of West Parsonsfield, for $190. The latter gentleman very soon sold them again for $213. Geo. H. Farr, of West Gardiner, has a pair of one year old, grade Durham steers, closely matched, well proportioned, and girthing six feet and two inches.

—A Maine man gives his method of treating baulky horses as follows: "Let me inform humane men and hostlers, and all who hold the rein, that the way to cure baulky horses is to take them from the carriage and whirl them rapidly round till they are giddy. It requires two men to accomplish this, one at the horse's tail. Don't let him step out. Hold him to the smallest possible circle. One dose will often cure him; two doses are final with the worst horse that ever refused to stir.

—Mr. H. Marsh, Hudson, N. H., says in the *Mirror and Farmer* that he has made and used a stump machine constructed as follows:—Take three pieces of common joists, put them together in form like the common harrow, letting the tapering or forward ends lap by each other some six inches, making a place for the chain to rest in. Cut off the roots at any distance you please from the stump, place the machine on one side of the stump, tapering end up, hitch the chain on the opposite side and pass it over the machine; then hitch a good yoke of oxen thereto and you will see the stump rise. He has cleared about three acres in this way.

—Of the English sparrow, which has recently been introduced into New York city, and is gradually spreading into the country, the following remarks were recently made by the chairman of the Haddingstonshire, Scotland, Farmers' Club: While it is true that they do some good by destroying the caterpillar, and the green fly in the bushes of the garden, yet they were destructive to the gooseberries; often they did not leave a single berry. They do great injury to the oat crop just before the grain arrives at maturity. He considered the sparrows "blackguards out and out."

—One rainy day a correspondent of the *Country Gentleman* counted the number of clover seeds in a cubic inch, and estimated that if he had counted a whole bushel the number would have equalled 27,000,000. As there are 43,560 square feet in an acre, he calculated that one peck would furnish over one seed to each square inch of ground. His estimates showed that a trifle over one pint of seed to an acre would give ten plants to the square foot. In seeding his land he waits until all danger from freezing and thawing is passed, and has had good success with less than four quarts per acre, sown after May 1.

ADAM RANKIN'S FARM.

This farm is in Warren County, Illinois, and contains eighty acres. Mr. Rankin received $20 at the Warren County Fair, for the best arranged and cultivated farm; the first premium of $15 on twenty acres of corn at one hundred and ten bushels per acre; the State premium of $50 for the best five acres of corn. One hundred and fifteen bushels per acre.

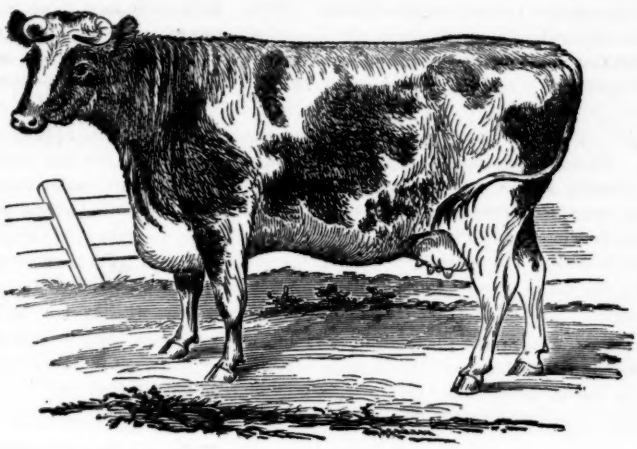
The crops on this farm amounted to $7160. Corn $1800; Surprise and Norway oats, at $5 per bushel, $1536; pork $1800; other hogs and horses $500; orchard and vineyard $1000. Cost of raising corn, $9 50 per acre, exclusive of his own labor. He says he has allowed no weeds to go to seed for several years, and now the land is easily kept clean. Thirty acres of corn was on meadow land, trench ploughed. Ten acres had one hundred loads of manure. This was ploughed and cross ploughed to mix the manure,—the last ploughing ten inches deep. There was not one hill missing on the ten acres. Three and four stalks in a hill. This grew two feet taller than his other corn. He wants to get one hundred and twenty-five bushels per acre on this field next fall. Most of the money made has been returned to the farm in improvements, drainage, manure, fine stock for breeding, &c.

His ploughing for potatoes and roots was ten inches deep. He says, I will tell you how I manage my hogs, or what I give them besides grain and roots:—

"I go to the coal banks and get a load, (twenty-five bushels) of slack coal and throw it on the ground, upon which I put one barrel of air slacked lime, and on the lime one bushel of salt, and from the way they eat it, and from the looks of their skin and hair it must be very good for them. At least I think it is just the thing for them, and they will never need anything else to keep them healthy, provided they have comfortable quarters and are properly fed. I have noticed my pigs when they have been shut up in pens for one day, run to the coal pile immediately on being let out and eat till satisfied, and all my hogs eat it just as regularly as they eat their feed. They eat the above amount in one month."

Certainly here are some very remarkable statements, especially when we remember that the average yield of corn in the State of Illinois for 1867 was but 23 8-10 bushels per acre. That they are correct is shown by the award of the premiums by men who had the means of knowing the truth. Such results show what faith in sound principles, accompanied by corresponding works, can accomplish. Deep ploughing and clean culture were the secrets of success. "Go thou and do likewise."

MILFORD, MASS.—The officers of the Milford Farmers' Club for the year 1869 are, President, J. E. Eames; Vice President, Richard Carroll; Secretary, Abraham Mead; Treasurer, Richard Carroll; Librarian, Elias Whitney; Executive Committee, Charles Leland, George H. Kendall, Henry Chapin.



SHORT-HORN COW OF DAIRY STOCK.

A few weeks since we gave some account of what we saw and were told during a brief visit with some of the dairymen of Worcester County, Mass., including a brief description of the Durham cows which are popular in that section. We were much better pleased with their appearance than we were with our description of them. It is therefore with much satisfaction that we are able this month to avail ourselves of the skill of an accomplished artist, in conveying a much better idea of this stock than could be done by any words of ours. In presenting the above illustration we assure the readers of the FARMER that here they may see

> ——"rising from the scroll,
> The image of the thought within the soul,"

which we brought away with us from our recent inspection of the short-horn dairies of Worcester county.

Of the Durham, as a dairy cow, Mr. Allen, in his late work on *American Cattle*, from which we borrow our cut, says:—

"Popular opinion, among those not particularly acquainted with their history or breeding, is widely at variance. They are the greatest milkers, in quantity, of any breed whatever—with the exception of the Dutch—as innumerable facts have shown; or they may be comparatively inferior, as education, keeping, or purpose may govern. We have numerous well authenticated instances of their giving six, seven, eight, and even nine gallons a day, on grass alone, in the heighth of their season, and yielding fourteen to eighteen pounds of butter per week, and of holding out in their milk, in proportionate quantity, as well as other breeds of cows, through the year. Cows so much larger in size than of other breeds, should be expected to give more than smaller ones, that consume less food; and without asserting that they do give more, in proportion to their size, it is claimed that when educated and used for the dairy chiefly, they give quite as much as any others. That the *inherent* quality of abundant milking exists in the Short-horns, no intelligent breeder of them need doubt. Our own observation in more than thirty years' experience with hundreds of them, first and last, under our own eyes, is to ourself, evidence of the fact, both in thoroughbreds and grades."

MASSACHUSETTS AG'L COLLEGE.

From the Sixth Annual Report of this Institution it appears that the whole number of students is eighty-five. During the first twelve months from the opening of the college, there were admitted, on written examinations, ninety-six students, of whom ninety-two were received as freshmen for a regular course. Seventy-four of them, at the time of admission, were acquainted with farm work, and thirty-five intended to become farmers, while forty-

three were undecided as to their future business. Their average age was nearly eighteen years. The general conduct of the students has been all that could be desired, and it is especially worthy of remark that there was no case of "hazing" during the past year.

The health of the students has been most excellent. No death has occurred, nor any case of alarming illness. The average absence from duty, on account of sickness or wounds, has amounted to less than one day for each student during the entire year. The average for the summer term, ending August 5th, was less than one-half day for each person.

Nearly all the agricultural societies of the State have shown their interest in the College by voting to pay the term bills of one or more students, the amount per annum for each being $54.

At the present time the following societies maintain scholarships, viz.: The Massachusetts Society supports three; Essex and Plymouth two each; Barnstable, Bristol, Bristol Central, Berkshire, Franklin, Hampden, Hampshire, Hampshire, Franklin and Hampden, Hingham, Highland, Middlesex South, Norfolk, Worcester, Worcester North, Worcester South-East, and Worcester West, one each.

Although there are as yet but two classes, Freshman and Sophomore, a full course of study occupies four years, and there will be two other classes, Juniors and Seniors, as in other colleges, in due time.

From the sale of 360,000 acres of land given to Massachusetts, for the endowment of one or more colleges for the promotion of education in agriculture and the mechanic arts, $236,307.40 were received. Two-thirds of of the annual income from this fund is to be paid to the treasurer of the Agricultural College, and one-third to the treasurer of the Institute of Technology, an institution in the city of Boston, which is designed to afford to mechanics advantages similar to those which the Agricultural College affords to farmers.

From this fund the Agricultural College receives an income of $8,296.99, besides which it derives an income of $580 from the Hill fund for the maintenance of the Botanic Garden. The college farm contains 383 acres, and cost $37,000. The buildings are put down as costing $125,000; farm stock, $4000; implements $2000; farm produce on hand, $3000. Donations have been received from various sources. The town of Amherst gave $75,000, the Legislature has appropriated $70,000, and $100,000 is now asked for the erection of additional buildings, for a supply of water, tools, books, apparatus, &c. In closing his appeal for this appropriation, President Clark says, "the public confidence and interest in the People's College will thus be increased, and will appear in the large number of students applying for admission, and in the donations which will assuredly come for special objects from wealthy friends, as soon as they are convinced that its foundation is secure. 'For unto him that hath shall be given, and he shall have abundance.'"

NEW PUBLICATIONS.

ANNUAL OF SCIENTIFIC DISCOVERY: or, Year-book of Facts in Science and Art for 1869, exhibiting the most important Discoveries and Improvements in Mechanics, Useful Arts, Natural Philosophy, Chemistry, Astronomy, Geology, Biology, Botany, Mineralogy, Meteorology, Geography, Antiquities, etc., together with Notes on the progress of Science during the year 1868, a List of recent Scientific Publications, Obituaries of eminent scientific men, etc. Edited by Samuel Kneeland, A. M., M. D., Professor in the Massachusetts Institute of Technology, &c. Boston: Gould and Lincoln. 1869.

To those who have read the successive volumes of this annual, the announcement of the issue for 1869, is sufficient. But many of the readers of the FARMER have probably never seen a copy of the work, although it has been published about twenty years, having been commenced by Prof. D. A. Wells, at present employed by the treasury department as special revenue commissioner. The character of the Annual of Scientific Discovery is indicated by its title-page, and is simply an account of the discoveries and improvements that have been made in the various departments of Science and Arts in all parts of the world during the past year.

In looking over the volume we noticed among the statements of facts indicating the progress of chemistry, an account of "Dry-earth Disinfection." We are told that "this system is destined soon to attract a large share of attention throughout the world from physicians, and from sanitarians generally," and it is pronounced by Dr. Mouatt, the Inspector General of gaols in England, to be "without exception, the greatest public benefit conferred by a private individual, in a matter so essential to public health, that he is acquainted with." Now what is this wonderful scientific discovery? Simply the application to "closets" and the vessels of the sick room, of a very unscientific material, known as dry earth, or muck, so long used by our best farmers for deodorizing,—no that is a scientific word—for preserving the manu-

rial properties abounding in their stables, pig-pens and privies! Let us, unlearned farmers, take courage. One of our coarsest operations—one that we almost blush to perform—has become scientific, and is minutely described in the "Annals of Scientific Discovery?" Thus profit, health and science unite in urging upon every farmer and upon every family the system of "dry-earth disinfection."

INLAND FISHERIES.

As the readers of the FARMER are well aware, we have always been favorably impressed by the experiments in pisciculture, or fish growing, in this State and elsewhere, and believe that it is an industry deserving not only of careful study but of a fair share of protection at the hands of our Legislatures. The subject is brought to mind again, by the report of the Commissioners of Fisheries, a document of great interest, and containing important statistics concerning this branch of industry.

It is gratifying to know that, even with the moderate amount of protection so far granted, there is already evidence that valuable migratory fishes, which had become almost unknown in certain sections, are once more beginning to return to their old grounds, and their increase, with the enforcement of proper restrictions against those who would "clean out" the streams for mere sport, is a question of time only.

The complaint now made in behalf of our inland fishermen, and those who depend on the tidal waters along the coast, is that our legislation has been partial, incidental, and spasmodic; and that one who intends to make a profession of fish culture, as others make a business of stock-growing, is obliged to go through the tedious and uncertain forms of special legislation for protection. Unless he is armed beforehand, he is not armed at all, however just his quarrel may be. The law recognizes his chickens and protects them; how it treats his fishes, the commissioners illustrate as follows:—

"He owns the land round a pond of twenty acres, and a fine spring fed brook, which flowing thence, runs to the salt water. He puts up a hatching-house; digs his pools; makes a dam and flume. He hatches and rears large quantities of trout, which grow rapidly, and live in the pond and brook, and go also to the sea in their season. One fine morning, he finds half-a-dozen men fishing at the mouth of his brook, each one with a basket full of his trout. He remonstrates. They reply, 'tidal water!' and go on fishing. In despair he seeks consolation in his pond. Lo! there are more men with more baskets of his trout. Again he remonstrates. 'Great pond!' reply the anglers. 'Over ten acres—free fowling and fishing according to ancient charter!' Sadly he seeks to ease his mind by strolling up a tributary brook which comes in through a neighbor's land. Behold! there is the neighbor himself, with a basket of trout taken from the brook. 'Very sorry,' says the neighbor; 'the *trout* may be *yours*; but the *brook* is *mine*!'"

It is suggested that our laws on the subject need only to be generalized into a system, and accompanied with suitable encouragement for the propagation of fish, to make our rivers alive again.

The commissioners, says the *Advertiser*, have had a variable, but in the main encouraging experience in the construction of fishways. When they began the work at Lowell, some of the factory superintendents looked on with a quizzical air, and suggested that the fish must have a schoolmaster to teach them to go up the steps. But the shad and salmon which had been waiting for the chance since 1849 knew better, and schools of them found their way into the upper waters without a master. But it is to the cultivation of food fishes, which long-continued improvidence has driven from our waters and made a costly luxury in our markets, that attention has been mainly devoted. Individual curiosity and enterprise had already prepared the way. Methods which, under the auspices of the French government, have made waste and barren waters more productive than the same area of arable land, have been tried with remarkable results. And though the prolonged hot weather last July made temporary havoc with Seth Green's spawning-fields at Holyoke, there is no reason to doubt that the means which have been successfully tested elsewhere may also be used to stock our waters with the life that is suited to them—"the carp, perch and pike, for sluggish streams, lakes and ponds; trout for the bounding brook, and salmon for the clear, swift river."

For the New England Farmer.

HEN MANURE.---SUPERPHOSPHATE.

I see an inquiry in last week's FARMER by William Allen of North Holland, Vt., in regard to mixing hen manure and ashes. I have been engaged in making comparative experiments with commercial and other fertilizers for the last two years. Perhaps the results may be interesting to Mr. Allen and other readers of the FARMER.

I mixed eight bushels hen manure with about the same quantity of rich loam and one peck of plaster. I used a bushel of this mixture to 140 hills, which yielded 144 pounds sound, and two pounds soft corn. One peck of ashes was added to three pecks of the above compost, to which was also added one quart of salt; applied it immediately to 140 hills and covered it up, which yielded 109 pounds of sound and 7 pounds of soft corn. No other manure was used. I left 140 hills with nothing, for a base, which gave 84 pounds of sound and 21 of soft corn.

It will be seen that the mixture without the ashes increased the crop 72, and that with the ashes, 30 per cent. These divisions were side by side and received the same culture, and the results were carefully weighed and noted.

Two years since, I mixed my hen manure and ashes,—both perfectly dry,—without composting. The crop was increased 50 per cent.,

and I advanced the same theory you advance in your remarks, but the experiment tells me that theory and practice do not always agree.

I also used Cumberland, Alta Vela, Bradley's, Rhode's, Glasgow, E. F. Coe's, and A. Coe's superphosphates at the rate of 14 pounds to 140 hills. The increase was from 50 to 80 per cent.—each kind paying for itself at least twice, and some three times.

I can raise more corn from one dollar's worth of good superphosphate than from the best half cord of barnyard manure I ever saw. I would also say to Mr. Grow that I shall plant four acres of corn this season and use nothing but "special fertilizers" in the hill, and shall expect to get from 45 to 50 bushels good sound corn to the acre.

The ground on which I tried the experiment was an old bound out field which I lately purchased, and has not had 15 loads of manure for the last 30 years. The end of it on which I tried these experiments, gave on an average 46 bushels to the acre. The other end was manured with sheep manure at the rate of 12 cords per acre, with night soil compost in the hill. This proved no better, although any one seeing the corn before it was harvested would have said that it was a third better.

The phosphated end required but two cultivatings and one hoeing. The manured end required two cultivatings and two hoeings. Manure will make weeds grow as well as corn.

Now I don't wish to be understood that I ignore the use of barnyard manure; on the contrary I contrive every way to make and save all I can. My cattle are stabled every night through the year, and well bedded with any thing I can obtain, such as leaves, loam, dried muck, &c. It matters little what it is; anything to absorb the liquid.

After my corn is off next fall, I shall cart on the manure at the rate of 8 or 10 cords to the acre and plow it in; the next spring, cultivate and sow with wheat, seeding to timothy and clover. By this method I get better wheat and better grass, and the land will hold out longer, than by the old method of applying the manure to the corn crop and then seeding down with wheat. Still this course is well enough, if farmers will manure liberally enough, but this is not apt to be the case among many farmers. The quantity of the manure is so small, or the quality so poor, that the corn gets it all, and there is nothing left for the wheat, and it proves a failure. Whereas, if the corn had been raised with some special fertilizer, and the same amount of manure had been applied to the wheat, a paying crop would have been the result, and the hay crop would be double.

By adopting some such course as this, many of the worn out farms might be brought to a high state of cultivation in a short time. The wheat crop in New Hampshire can be doubled in three years, and there is no reason why a larger portion of New Hampshire farmers should not raise their own wheat, and at a handsome profit. S. C. PATTEE.

Warner, N. H., March, 1869.

For the New England Farmer.

CULTIVATION OF THE STRAWBERRY.

Thinking that some readers of the FARMER, like myself, may be interested in small fruit culture, I venture to give my experience, more particularly with the strawberry. I have been engaged in the small fruit culture twelve years, and claim that in New England the business is yet in its infancy, when compared with New York, New Jersey or Pennsylvania.

It is not my design to enter upon a treatise on varieties, or their adaptation to particular soils, but will confine myself to those kinds which have best succeeded with me. I prefer the following method of cultivation. Plant three rows two feet apart, with the vines at the same distance from each other in the row, then leave a space of five feet, and so on, leaving a space of five feet between each three rows. On this plan the cultivator can be used, saving much labor. It also leaves a space for the pickers. After picking, apply a dressing to the paths, cultivate it in, and they will soon be covered with vines. Then break up two feet in width of the middle of your three rows for the pickers next season. By this mode of culture runners will need but little cutting. For this style of culture I should select Downer's, Wilson's, Large Early Scarlet, and Agriculturist.

For high, warm soils, and for what is usually called hill culture, the plants are set one foot apart in the row, and the rows at such distance that the cultivator can be run between them. Plants are not allowed between the rows. If a few of the best plants are saved between the hills for fruiting, it soon becomes row culture For this mode of culture I should select Agriculturist, Wilson's, Cutter's Seedling and Russell's for high ground; Triomphe de Gand and Jucunda for lower land.

Select a piece of land which has been planted the year previous. After ploughing, give it a good dressing of stable manure—or muck that you are sure is good will do,—and cultivate it in. Stable manure for this purpose should be well decomposed, as no raw material directly applied to your strawberries will pay for itself except as a top dressing in the fall or winter. It is often remarked the more manure the more fruit; but in some cases I find the more manure the more vines. I have grown 750 boxes

from half an acre of Downer's Prolific and Early Scarlet without any stable manure being applied for eight years. I used mud, or rather rich vegetable matter, taken from pond holes surrounded by cultivated land. This is equal to about forty-five bushels per acre. I do not make this statement thinking it a great yield, but as a matter of interest to some who may not have plenty of stable manure.

I am often asked the question whether our markets will not soon be glutted with strawberries. Of course I cannot answer positively, but think those who raise varieties which our New England markets demand, and put them up in a proper manner, are in little danger of a glut at an early day.

I do not know that I ever had a good crop without winter protection, and never expect to, unless the ground should be covered with snow. Stable manure is the best covering; rye or wheat straw, hay and oak leaves are good for low ground. Pine needles will answer; a thin covering only is required. The mulch should be removed early in the spring, as it will have a tendency to heat the plants.

I noticed in the FARMER of February 13, an essay by Fred. G. Pratt, in which he says that strawberries grown in the hot lands of New Jersey are inferior as to quality, to those grown in the cool climate of New England. I fully agree with this statement, and should judge the piece was written by a practical fruit grower. I intend planting two acres of Downer's, Wilson and Early Scarlet, and the same of Wilson's blackberry, thus showing my faith by works.

Room will not allow me at present to make any remarks on blackberry and raspberry culture, but I would like to hear the experience of some practical grower. E. W. SHAW.

Carver, Mass., March, 1869.

For the New England Farmer.

CO-OPERATIVE FARMING.

The past season has been an unfavorable one to commence this novel and important enterprise. Late planting, short summer and early frosts, together with hard soil, scarcity of labor and team work, are conditions not favorable to a very flattering report of the first season's operations of the North Easton Planting Company. Nevertheless we will endavor to give the facts regardless of consequences.

The Original Plan

Was simply this:—A certain patch or field was hired for a year. An estimate was made of the cost of cultivating a crop upon it, whether of corn, vegetables or other productions. If the cost was estimated, say, at fifty dollars, we then issued fifty tickets, and sold the same to A, B, C, &c., at one dollar each, with the promise to deliver at harvest, one-fiftieth part of the crop to each ticket holder. But if the cultivation and other expenses exceeded fifty dollars, then part of the crop must be sold, or more tickets issued to pay the excess.

The Object

Was to induce persons of small incomes to save up and invest a part of their earnings from time to time in sums so small that they would scarcely miss the money, while at the same time they would be paying in advance for a portion of their family supplies.

The Little we Did.

We planted only six acres of ground the past season, three to potatoes, one to corn, the remainder to beans, squashes, cabbage and turnips. We hired the land, labor, and team work, bought the manure and seed,—all of which was procured with difficulty and at large prices.

Results.

The outlays upon our potato patches amounted to two hundred and seventy-eight dollars. The cash value of the crop, at retail prices, amounted to two hundred and eighty-three dollars; giving us five dollars profit.

The expenditures upon our corn patch amounted to seventy-eight dollars. The cash value of the crop was only fifty-eight dollars, leaving us minus twenty dollars; returning only seventy-four cents on a dollar share. This may have a hard look for co-operative farming, but we do not consider it by any means as decisive. Through many mistakes and some unavoidable casualties, we obtained only about half the crop that usually grows upon similar patches of ground.

Upon our bean field we expended fifty dollars. The value of the crop was fifty-five dollars; giving us five dollars profit.

The outlay upon our cabbage and turnip patches amounted to fifty dollars. The value of the crop was fifty-seven dollars; leaving seven dollars as profit.

Upon the whole operation we have lost three dollars;—amounting to one and one-half cents per share and the interest for a few months upon the investment.

Will this Method of Farming Pay?

Yes, we believe it will, under judicious management. Our expenses were too large by one-quarter. By hiring our ground for only one season our loss may be estimated at five dollars per acre, and it is believed that at least ten per cent. on the sum expended should be allowed for the unfavorable character of the past season for maturing crops. With these allowances can we do any better with our money than to employ it in farming?

Suggestions for Future Operations.

Let a few honest persons in each township organize a planting company, and instead of hiring ground and planting as we have done in this first attempt, contract with the farmers round about to plant, sow, and carry through any crops desired by the organization. All to be well cared for, harvested and delivered

to the ticket holders, who reside within certain distance from the plantation. Let the organization pay these farmers, or contractors, one-third at planting, one-third at hoeing, and the other third at harvesting. This plan will give new life to New England farming. It will simply be subscribing and paying in advance for our food, the same as we do for our newspapers, and running the risk of getting our money's worth.

L. SMITH, Manager.

North Easton, Mass., 1869.

REMARKS.—Having been made a share-holder in this company as a compliment for a notice last spring of the project of our North Easton planting friends, and having duly received our share of the proceeds in cash, we have a personal interest in this planting company. We regard the result of this first experiment in co-operative farming as more successful than could have been expected, and creditable to that portion of old Massachusetts soil on which it was tried. Few farmers will lease their best fields, or those which were well manured the previous season. The company had to take such as they could get. The manure applied to cultivated crops is only partially expended the first year in the production of those crops. Labor and team work was probably paid for at the highest prices. And yet the crops from these six acres fell only three dollars short of the expenditures. We suppose the ticket holders were mostly mechanics and manufacturers. Now, if they could have done most of this labor "out of hours" themselves, and especially if they could have done it on their own land, they might have greatly reduced expenses, promoted their own health, and perhaps escaped some of those "evil communications" and costly habits which sometimes result from a different employment of their leisure hours.

For the New England Farmer.

FIRE-PROOF STABLES.

Is it not a wonder that among all the improvements in farm buildings with which our agricultural papers are filled, that we have no plan for building barns in such a manner as to prevent the repetition of such fires as that which, at Burlington Vt., a few days since, burned one hundred and forty-five animals? I think a barn might be built without being excessively expensive that would give time to remove the stock, even if it might not burn down without injuring them. Instead of the ordinary cellar, let the four walls be of stone, the front one having two arches for entrances. Put a cheap, but substantial floor over the cellar about six or eight inches below the top of the side walls. Let this floor be supported by brick or stone pillars, with as little wood work as possible below the floor. Level up from the floor to the top of the wall with dirt, stone, &c., finishing with gravel, and grout with cement. Leave sufficient openings to put down food to stock, but protect them with metallic trap-doors. Build the barn on this foundation, and in case it took fire it would be a long time in heating through the cement and dirt to the wood floor. It is doubtful if it ever got hot enough to burn, as heat does not readily descend. As the points of egress would be some feet lower than the fire there would be a strong draft of cool air that would render it possible to remove the stock after the heat and smoke had made it impossible to approach the fire on a level with it. The walls of the cellar should contain windows sufficient for the admission of light, and ventilation. Judging by the expense of grouting cellars, I think that part would be cheaper than a good plank floor, so that the principal extra expense would be the under floor, and this would be in part made up by the extra value of the hay lying next the floor, for it is a well known fact that the hay lying on a common floor over a stable is nearly or quite spoiled by the absorption of noxious gases. I do not present this as the only or best plan, but as *one* plan, and hope others will reflect upon its necessity and improve upon it, until we shall see all good barns built with reference to preserving stock from a cruel death in case of fire, and the owners from consequent loss. Yours, &c.

R. S. HINMAN.

River Side, Conn., March 15, 1869.

For the New England Farmer.

DEGENERACY OF THE OAT CROP.

What are we to do about raising oats? It has now been several years since a good crop of this grain has been raised in our locality, and I judge from accounts published that this complaint is quite universal throughout the Eastern States. And when we strive to ascertain the cause or its remedy we have nothing to guide us but the merest speculation. Many, however, think it owing to climatic influence, others to the soil. For one I hardly look upon it as caused wholly by poor soils, as we often succeed in getting a fair growth of straw without a corresponding yield of grain.

It would seem to be good policy as long as it continues to be so uncertain a crop, to substitute in a degree some other grain. Barley, either mixed with oats or alone, is being grown to some extent with us for this purpose.

The objections to mixing these two grains, are that ordinarily the barley ripens a few days earlier than the oats, and also being a hard shell grain should be ground previous to feeding. This last however, is not so much an objection, as teamsters are rapidly getting in the way of feeding only ground feed to their teams, which, no doubt, is to be preferred in an economical point of view, as it seems a well proved axiom, that unground grain should be rarely fed except to young horses.

Indeed nine tenths of all team horses are probably fed on ground grain, of which corn

forms the larger part; railroad and canal horses being fed in this way.

In connection with this subject, I would like to propound the inquiry, whether agriculture is ever to be properly reduced to a science; or, in other words, am I ever to know with any degree of certainty just what properties a certain field lacks in order to produce a good crop of oats,—for we all know that it is not always *manure* that it needs. For instance, a field gives a good strong straw, but is very light in the head. Is agricultural chemistry going to give us this information?

I propounded this query to a noted agricultural writer (Mr. Greeley,) a short time since, and he replied that in his opinion it never would be reduced to a science in the sense that mathematics are, but thought we were slowly nearing that period. The analyzation of soils seems not to answer us here; indeed, I think I am safe in making the statement that not as much reliance is placed on its benefit as there was a few years since.

For the present, then, it would seem our chief dependence must be on careful and repeated experiment. The writer has a portion of alluvial soil which grows the largest of corn stalks, but will not give near the yield of corn as another portion of the farm of lighter soil which gives much smaller stalks. The inference of course is, that one field lacks the necessary ingredients in the soil to give the growth of the grain, while the other possesses it naturally. Now if I knew just what *was* lacking in the one field, what would hinder me from applying it artificially, and thus insure a good crop of corn. And then again in the growth of grass. We say a certain field is *natural* to grass. True, but why is it? Evidently just because the soil contains the proper ingredients to perfect its growth. And so again, if I knew just what went to make up a good grass soil, might I not by a proper application of the necessary parts, convert a comparatively barren field to good mowing or pasturage. It will not quite do to reply to these theories by saying manure answereth all things in farming, though this is nearer the truth perhaps in relation to the growth of grass than almost any other farm crop. It will not always give us a good yield of the cereals; some other conditions of the soil are absolutely necessary, and what these requirements are is what we are groping for now in the dark.

W. J. PETTEE.

Salisbury, Conn., March, 1869.

REMARKS.—Dissatisfied with the results of the analyzation of soils and manures by the crucible and acids of the chemist, a French Professor, M. George Ville, has resorted to plant growth as a more philosophical process, with results that have attracted considerable attention in the agricultural world. Dr. Nichols of our own country has also adopted a similar process, with most encouraging success, on his farm in Haverhill, Mass. And it is possible that when farmers learn the lesson taught by Æsop's fable of the reapers, they will rely more on their own "experiments" and less on the "science" of the closeted chemist.

SOAP SUDS.

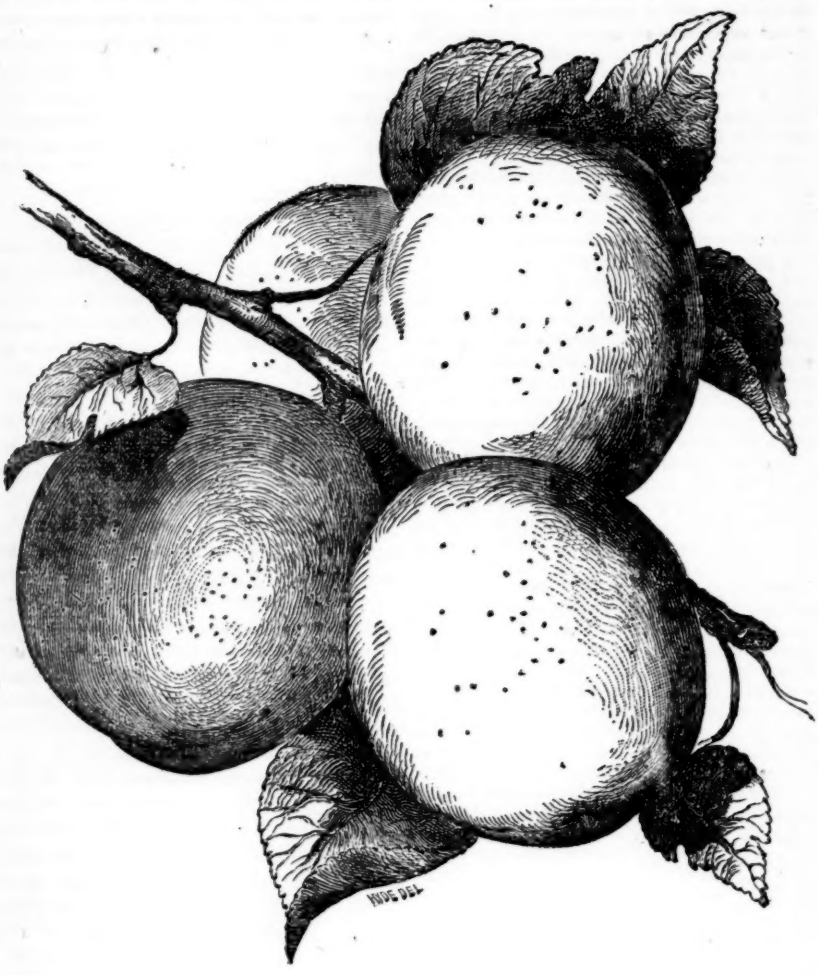
A cistern or tank, of the capacity of from two to four hogsheads, should be constructed in the vicinity of the sink or laundry of every farm house, and a system of conductors so arranged as to lead the suds and slops into it as they are made.

This liquid matter is a powerful fertilizer, containing the food of plants in a state of solution, and consequently in a condition to be readily taken up and absorbed by vegetables as soon as applied.

Irrigating gardens with soapsuds, after the liquid has become stale, is a powerful means of promoting vegetable growth, especially in dry weather. Some have considered the value of suds to be equal to that of the same weight of manure; this, however, is probably an exaggerated estimate; yet we want no additional corroboration to satisfy us of its intrinsic worth, as a vegetable stimulant.

Great care should be observed that the decaying matter and suds do not taint the air about the dwelling, as in the process of fermentation and decomposition sulphuretted hydrogen gas is thrown off. This is an active poison. When inhaled it acts directly upon the blood, thickening it and turning it black. A single gallon of it, mixed with 1200 of air, will render it poisonous to birds, and one gallon in 100 will kill a dog. Many of our people are not sufficiently careful about allowing such "sinks of iniquity" to exist about their dwellings.

—Maple sap weighs eight pounds to the gallon, thin syrup ten, and thick syrup, that grains at the bottom, eleven. Trees on rocky hill-sides yield the sweetest sap. Whiteness of color and a rich maple flavor depend on boiling the sap soon after it flows, and keeping things neat as wax. The sooner sap is boiled the less scum it shows. The value of maple syrup depends not on the saccharine matter, but on the maple flavoring. The cans or jars containing the syrup should be sealed air-tight



THE APRICOT.

It is remarkable, says Mr. Thomas, in his excellent work on fruit culture, that a fruit of such excellence as the Apricot, and ripening from one to two months before the best early peaches, should be so little known. In its natural character, it is more nearly allied to the plum than the peach, resembling the former in its broad leaf, and in the smooth stone of its fruit; but downy, like the peach, and partaking largely of its flavor and excellence. It is budded on seedling apricots, and on peach and plum stocks. The trees have generally been planted in the warmest situations, such as the east or south side of buildings, facing the hot sun, where they have blossomed early, and been liable to be destroyed by spring frosts. If trained on a building, such an exposure should be especially avoided; a northern or western aspect is far preferable.

The above engraving was made from a cluster of the most beautiful apricots we ever saw, that were left at our office by Mr. J. Q. A. Wild, of Quincy, Mass. The tree on which they grew was trained on a trellis on the west

side of the house, and sheltered from the northwest winds, and on cold frosty nights in the spring was covered with a sheet. The soil and cultivation in this case was not different from those necessary for the growth of the pear, peach and other trees. The soil should be deep and dry, without a wet subsoil.

We give the illustration, and the brief suggestions above, without expecting that our friends will go into a general cultivation of this fruit. But as it is not only a delicious fruit, as well as an ornamental tree, especially when in bloom, those having suitable situations and desiring variety in the embellishments about the house, will be glad to see the apricot figured, and know something of the habits and method of cultivating the tree. The fruit, to our taste, is not so juicy and rich as that of a good peach, but a well formed tree in the free air, or judiciously trained, is one of the most beautiful objects to be found in our gardens.

IMPROVEMENT OF LAND BY SHEEP.

Mr. H. G. Abbott, of North Vassalboro, Me., concludes a communication in the *Maine Farmer* on sheep raising with the following statement, which was made in corroboration of his opinion that there is as good encouragement for farmers to increase their flocks of sheep as any other kind of farm stock; and that if farmers would keep their sheep on their tillage land they would improve it to almost the amount of the expense of keeping the sheep the year round.

I made an experiment in this direction four years since, that satisfied me on this point. I will state the same, hoping it may be the means of inducing some to try it also.

I had a grass field of about thirty acres, smooth and free from stumps and stones, sloping gently to the west, and of clay loam soil. One end of the field was so completely run out, that nothing but white and yellow-weed was to be seen on the field. Not having barn manure sufficient to dress what I had up and this field in addition, I concluded to turn out ten acres of the poor end to pasture and after pasturing it two or three years to take it up and dress it and put it into grass. Accordingly I run a cheap board fence across the field inclosing ten acres, and put on to the piece fifty sheep, without lambs, and kept them there two seasons. They fed it close to the ground, not allowing a blade of anything to get over an inch high.

In the spring of the second season I perceived a greenness on the field, looking different from what it had for a few years past, and was led to examine the same, and, to my surprise, I found that there was a sprinkling of grass coming up over the field. I put fifty sheep on the second year, and noticed through the season, that the sprinkling of grass increased; so much so, that I called the attention of one of my neighbors to the fact. His reply was that he had been noticing it for some time.

The next spring, at the usual time of turning out sheep to grass this piece looked so well, that I concluded to let it come up and mow it. Accordingly I took up the fence, and when I came to put on my mowing machine and hand scythes, to the surprise of myself and my men, I had the heaviest piece of grass on my farm—estimated by good judges who helped cut it, to be two tons to the acre, and some parts two and one-half tons, and of the very best quality, with hardly a stalk of white-weed or yellow-weed to be seen. I cut the same piece last season, with about the same results.

I will state that I put upon the field about two bushels of plaster to the acre and a very small amount of grass seed. I also went over the whole thirty acres in the same field, but found no such results. I could see from the road all the season, to an inch, where the fence was taken up. I will not undertake here to go into the figures showing the advantage of this manner of treatment for worn out land, but I do believe that I cut as much hay the two years past from the piece of ground from the effect of sheep running on it, as I should from a dressing of yard manure—and the expense of plowing and fitting, and the application of the manure must have been quite an item—whereas the dressing from the sheep and the application of the same did not cost anything; for sheep are generally pastured on land that we cannot cultivate.

One suggestion, more, and that is the importance of going over our grass fields in the spring of the year and scattering on a sprinkling of grass seed. Nothing of such light expense pays so well.

Queer Hog Fattener.—A singular discovery has just been made at Cincinnati. It seems that a man upset his kerosene lantern into his meal bin, and he noticed afterward that his hogs ate the damaged fodder with avidity. This gave him an idea, and by experiment he found that five week's feeding with kerosene mixture made one of his hogs so fat that it could scarcely stand. The animal was then tried into lard with the following result: When cool the lard did not congeal, but the addition of a certain amount of potash resolved the contents of the kettle into three distinct substances—the first a light, transparent oil, better than kerosene or sperm oil; the second, a jelly-like substance which turned to soap; and last, a small residuum of insoluble muscle.

EXTRACTS AND REPLIES.

SALT FOR WHEAT—BEANS—PUMPKINS—ROOTS.

Will some of the many readers of the NEW ENGLAND FARMER inform me if common, coarse salt is beneficial to a wheat crop; if so, how much should be applied to the acre? When and how applied? Also is it profitable to plant beans among corn? Should they be planted in the hills or between them? Are pumpkins profitable to plant with corn? Which is the most profitable crop, under the same circumstances, for feeding stock,—turnips, beets or potatoes?

Brother farmers, and Mr. Editor, please give us more "Extracts and Replies;" they are just what we want for information. Let them be brief and to the point; and relate to all the different modes of stock raising, applying manures, the cultivation and harvesting of crops, and all that pertains to farming, together with the results of all experiments, whether successes or failures. NATT.

Danville, Vt., March 16, 1869.

REMARKS. — The results of experiments that have been made in the use of salt for manurial purposes have been so diverse that we suppose there is no settled opinion as to its value. Its use for this purpose seems to have been known in Bible times, and reports of experiments with it are found in our oldest agricultural works, and yet it is but little employed by our best practical farmers. It is also recommended for its destructive effects on thistles and other weeds. As a stimulant it must be classed with special manures, and its beneficial effect depends on special circumstances, which are not well understood. Perhaps this is one of the agricultural riddles which our farmers' colleges are to solve. A correspondent of the *Germantown Telegraph* divided an acre of clover land into strips of thirty feet wide. To the first strip he applied plaster broadcast, at the rate of two bushels, at a cost of $1 per acre,—to the second strip, ground salt, at the rate of two bushels, or $2.50 per acre; to the third strip, a mixture of salt and plaster, one bushel each, costing $1.75 per acre; and so on throughout the field. The growth on each third strip with salt and plasture mixture was decidedly the best throughout the season; the second, with salt alone, was next; and the first, with plaster alone, was the poorest. These strips were sown at different times, extending over two and a half weeks, to ascertain the best season for application. Plaster did best when sown when the clover was two or three inches high, and when the leaves were wet with dew; the salt did best when sown just before a warm rain. The beneficial effects of the salt and lime mixture, he accounts for by assuming that it contains sulphuric acid, lime, chloride, and soda,—four ingredients most needed by clover.

But our correspondent's inquiry relates to the effect of salt on a wheat crop. In his *American Wheat Culturist*, Mr. Tood says, his own experience is not in favor of the application of salt to growing wheat, or to the soil where wheat is to be sown. Still he has reason to believe that on *some soils* a dressing of salt has been and may be again of great value to the growing crop. He advises each farmer to make experiments on his own fields, and if the straw or grain is better on the salted strips than elsewhere, then he may conclude that salt is beneficial to his land. Mr. Mechi mentions a field in England on which the wheat would lodge unless salt was applied. One farmer there salted his manure.

Mr. John Johnston, the model New York farmer, has received great benefit from the salt on his wheat fields. His land is a rich heavy soil, on the borders of one of the inland lakes of that State, and may have been once covered by water. Some years ago he made the following characteristic statement in the *Genesee Farmer*:—

"I did last year what I never did before; that was ploughing up wheat stubble and sowing again with wheat. It is a respectable looking crop now, but if you saw the half of the field that I sowed salt on, say a full barrel to the acre, I am almost sure you would order forty or fifty barrels of second quality salt to sow in September or October. The salted wheat stands much thicker on the ground, is considerably taller, came in ear fully four days before the other, and altogether looks richer in every way; and as I had not salt enough to sow the whole field, I sowed the half that has hitherto brought the worst crop and latest in ripening. Now it is much the best. I can stand in the middle of the field and look forty-five rods each way and see distinctly how far the salt came, or I can walk or ride down the side of the field where not salted, and see the line as plainly as if the one side was corn and the other wheat. If this won't make men experiment with salt, I don't know what will."

Farmers in the neighborhood of the salt works in New York, where refuse salt can be had very cheap, have tried it pretty extensively, and their conclusions as to its value, though not uniform, has not been such as to encourage its general use. But Mr. Geddes says in a late article on the subject in the *Tribune*, that certain things have been learned, one of which is that a new beginner is very apt to put on so much as to destroy or greatly injure his crops. Indeed, it is well understood, that salt in large quantities entirely destroys the fertility of a soil. It is also known that in small quantities on some soils an application of salt is beneficial. In the present state of our knowledge we know no better way of deciding its effects on a given field or crop, than by an experiment on a small scale.

The other questions of our correspondent must be handed over to "the many readers of the FARMER" whose pens are lying idle for want of a subject to write upon.

LYNDON, VT.

Lyndon, as a township, is six miles square, and is nearly equally divided east and west by the Passumpsic river. Along the valley of this river, as well as on the hills to the right and left of it, are some of the best farming lands and farms in this section of the State; and the thrift and prosperity of her farmers speak well for their intelligence and enterprise. Lyndon has produced some fine horses for the city markets, and her cattle and sheep have won a name not only in the county

and State, but throughout New England. The Lyndon farmers, as a class, devote especial attention to the production of beef, and to do this not only raise large quantities of grain, which they feed out on their farms, but many of the largest farmers make a practice of purchasing more or less Western corn for feeding purposes. By this means they not only have extra beef for the market, which is a source of profitable income, but it keeps their farms in good condition; if anything improving in productiveness and value from year to year.

As a sample of the beef produced in town, the following, marketed within the past two or three weeks, may be worthy of mention: Amasa Bemis & Sons, a pair of Durham oxen, weighing 4150 pounds. This pair received the first premium at the Caledonia County Fair last fall. Another pair, three years old, owned by the same, which weighed 3370 pounds. John Howland & Sons, marketed a pair the same week weighing 3950 pounds. The week following, Chas. Sanborn sent a pair to market which weighed at home 4230 pounds. One of the pair was considered one of the best and fattest oxen—it was not the largest or heaviest—that has been fattened in town for some time; its live weight was 2300 pounds. Henry Chase sends a pair this week weighing about 4000 pounds. A. O. Harris has a pair of white Durham oxen which weigh 4600 pounds, and are still growing and fattening well. He wants to see them weigh 2½ tons. More anon.

I. W. SANBORN.

Lyndon, Vt., March 23, 1869.

CRACKING UP NEW THINGS.

Why do the FARMER and other papers crack up the new kinds of potatoes, oats, &c., which by the time enough of them are raised to come into general use, turn out to be very inferior as to quality? The "Early Goodrich," a year or two ago were praised to the top notch in the FARMER, now they are so poor that there is no sale at all for them except as feed for stock—no better than the "Californias," or the Rohans of old. In a year or two the Early Rose, and No. 4 potatoes, and the Norway oats will turn out, no doubt, in the same way.

Barre, Vt., March 14, 1869. A. J. SMITH.

REMARKS.—As we try to be very cautious about cracking up new things, we hardly know what to say to our correspondent, unless it is to throw ourselves on his mercy, with the remark that we find it a hard matter to conduct a paper in such a way as to suit every body. Cowper called a newspaper "the herald of a *noisy* world" in his day, and if he had lived till now we do not think he would wish to soften down the expression. The world is as noisy as ever. Inventors, discoverers, experimenters, and advertisers, all of whom are admitted to our columns, crack up their favorite hobbies, and the poor editors are held responsible for all the noise they make. Would Mr. Smith exclude them entirely? Would he shut out everything "new" from his columns, were he in our place, simply because it is new, or because he was not certain it would prove a good thing? How long is it since the Jackson White was a new potato? the Baldwin, a new apple? the Morgan, a new horse? the Merinos and Cotswolds, new sheep? the mowing machine, a new implement on our farms? the railroad a new thing in the whole world? The papers that "cracked up" these new things will not now be condemned. Farmer Burns once asked for the gift "to see ourselves as others see us;" but editors need a gift or faculty to see new things as they will be seen after they have been thoroughly tested and tried under all the varying circumstances of thousands of experimenters. If Mr. Smith can tell us how to acquire this faculty, we promise never again to crack up a worthless potato, a poor implement, or an inferior race of animals.

SUMMERING MANURE.

I wish to inquire through the columns of your valuable paper, if manure made through the winter will depreciate in quantity and quality by laying in the cellar until fall, if hogs are kept on it, and the cattle are stabled nights through the summer? And if such manure will last as long if applied to land in the fall and planted next season, as green manure applied in spring?

SUBSCRIBER.

New Hampton, N. H., Feb. 24, 1869.

REMARKS.—If properly covered, as all manure should be, with muck or loam, the manure in a *cool cellar* will not deteriorate in quality. If it undergoes fermentation it will decrease in *bulk* somewhat. But if hogs are kept upon it it will not be likely to do so. If it becomes finer by keeping, it will be more readily taken up by growing plants, and may not last so long as green manure; but the more the manure is taken up, the *larger the crop will be.* So nothing is lost in that direction. We are inclined to think that it would always be best to apply all the summer made manure in the fall, and plough it under. That is our practice as far as we are able to do it.

SEASON IN ORLEANS COUNTY, VT.—CROPS ON THE FARM OF J. H.

We are having a long winter. We commenced feeding at the barn a month earlier than usual. The ground has not been seen since our first snow storm. We have had but very little extremely cold weather, and scarcely any rain; our storms having all been snow, which will now average four feet deep. There is but very little frost in the ground. Grass roots have had a good protection unless the mice have worked them. We have, as yet, seen no signs of spring; no robins or other spring birds.

My cows, ten in number, have averaged the year past, $62.50 per head, beside what we have used in a family of nine persons. Four acres in corn have produced four hundred and twenty bushels of ears, on sod ground broken in spring, with light coat of green manure, applied before ploughing. A compost of old manure and muck, which was drawn directly from the swamp to the field the fall before it was used, an ordinary shovelful to the hill. It was more than three-fourths muck. One acre of potatoes, Jackson Whites, 250 bushels. One acre and one hundred and twelve rods of wheat produced forty-five bushels. Soil a mixture of granite and lime with some slate stone. I plough from eight to twelve inches deep. We have raised some over $100 worth of poultry.

I had a two year old heifer which came in May 23, 1868, which gave twenty quarts of milk per day and made one and a half pounds of butter per day, June 17th. I sold her for $100. J. H.

REMARKS.—A very concise statement of good farming. Forty-five bushels of wheat on less than

one and three-fourths of an acre; over fifty bushels of corn, and 250 of Jackson White potatoes to the acre, with an income of $62.50 per cow on a dairy of ten cows, besides supplying a family of nine persons, are results so creditable to your soil and your management, that we think our readers will regret that you did not take a little more space for particulars, and that you do not authorize us to give your name in full. Don't be too modest.

MAKING MAPLE SUGAR.

In this section we usually tap our trees about the 20th of March. The ⅞ bit is in general use. The Franklin spout, with hook for bucket, is considerably used and is liked well. Tin buckets are preferred, costing about thirty dollars a hundred, and will last a life time if well taken care of. For boiling, galvanized sheet iron pans, four feet long, two wide and six inches deep, are the best, as they will not stain the syrup; one being set six inches higher than the other; the tank for the sap is still higher; then we have a tin pipe, with faucet attached, leading from the tank to the pan. Two such pans will boil the sap of one hundred and fifty trees. We calculate on a gallon of molasses from a barrel of sap. We boil it down to syrup in the woods, carry it to the house, strain it, and, after setting over night, put it on to boil, adding a half cup of milk to cleanse and to make it light colored. A good nice article is generally worth about $1.50 per gallon. FAIRFIELD.

Fairfield, Me., March 20, 1869.

SUGARING.

I noticed in your issue of March 20, a few hints on sugar making, some of which coincide exactly with my own ideas of that truly *sweet* work; for you must know, that, though only a boy in years, I have had considerable experience in the bush. "A. C., Jr.," says he finds he gets as much sap by boring ¾ inch deep, as by boring 3 or 4 inches. Undoubtedly he does, while boring the latter depth is simply "tree slaughter," and ought to be an indictable offence. I prefer to bore with a ⅞ inch bit, and not less than ¾ nor more than 1 inch deep. I prefer tin buckets that will hold about twelve quarts each, as wooden buckets get slimy at the bottom and cause the sap to sour. Wooden spouts are in my opinion the best, as metal ones are apt to corrode, and then they are unfit for use. I like a wire hook from the back end of the spout to hang the bucket on, which avoids damage to the tree by driving spikes into it, and saves the chopper from uttering bad words on striking his new axe on an iron spike. The sap should be strained before boiling, and the syrup settled before sugaring off. Use a sheet iron pan, six inches deep, in sugaring off, and if you are very careful not to burn it, I'll guarantee sugar good enough for any body,—even for you, Mr. Editor. G. F.

Milton, Vt., March, 22, 1869.

EXPERIMENTAL PIGS.

I had two pigs killed yesterday which were ten months and four days old. The breed was claimed to be half Chester and half Essex by the man I bought them of. At six weeks old one weighed 14½ lbs. and the other 16½ lbs.; and I paid $10 for the pair. The entire cost, including first price, milk, meal, killing, dressing and cutting up,—everything but *dish water*—has been $68.65. The one that was the smaller to begin with, weighed to-day alive, 449 lbs. and dressed 383 lbs., and the other alive 386 lbs. and dressed 330 lbs., making for the pair 713 lbs.; worth at 16c per lb. $114.08, giving me a net profit of $45.43. I have allowed nothing for taking care of the pigs supposing that the manure would pay for that. Nor have I reckoned the intestine fat.

I raised these pigs as an experiment, to see if I could make anything out of the operation. Have I done as well or better than is usually done?

CHAS. O. BACHELOR.

Northbridge Centre, Mass., March, 10, 1869.

CASTRATING COLTS.

I wish to learn what is the best *age* and *season* of the year to have this disagreeable job performed?

Does the deferring it for six or twelve months, or longer, affect the *form* of the colt? I have an impression that such delay tends to develop the *fore* quarters of any male more than the hind quarters. Consequently, if an animal is too light *forward*, in proportion to his hind quarters, he ought to remain entire till the deficiency is corrected; but if too thick and heavy forward already, castration should take place at the earliest practical time.

It has been customary hereabouts for years past to have colts castrated when yearlings, with few exceptions. I hope these inquiries will be answered *soon*, as I have a case in point, a black colt, sired by "Smith Morrill," (a square built, heavy-limbed bay, 1300 pounds, "2.43" horse,) which is a very well built, high life trotter, with head and tail in the best possible position, and all right except a little lack of depth of neck where it joins his shoulders, perhaps some would say "he is too low on the withers." His breast is full and wide, and his legs are very wide and muscular, especially his forward ones at their junction with the body.

He is large, thrifty, and has been growing fast ever since weaning time; weighed 531 pounds the day he was six months old, and now at just nine months old stands 58 inches, or 14½ hands high forward, and 59 inches at the rump. My query is, will delaying castration for six months or longer have a tendency to improve his form in the defective place specified? Will a change of diet, or any particular food or treatment have such a tendency? His feed since weaning has been hay, one quart cut roots, one pint each of oats and shorts at night, in the stable, tied after watering; the same at six o'clock in the morning; at half-past eight A. M., watered and left in the yard till pitched in stable and fed hay alone at noon.

Randolph, Vt., March 13, 1869. R. N.

REMARKS.—The views of our correspondent are confirmed by *Stonehenge on the Horse*, an English work recently published by Porter & Coates, of Philadelphia, and edited by Dr. R. McClure of that city. Ordinarily the best time for the operation is said to be just before weaning, if the weather is mild. If, however, the conditions spoken of by our correspondent exist, its postponement to the following spring is advised. The cold of winter and the heat of summer are both to be avoided. April, May, September and October are suitable months.

FOWLS.

I would like to say a few words in regard to the Black Poland fowls. I prize them very highly, and can recommend them to farmers as being good layers; hardly ever wanting to sit. They are peaceable about the yards, and I consider them among the best fowls I have ever owned.

A YOUNG SUBSCRIBER.

Dover, N. H., Feb. 18, 1869.

Ladies' Department.

THE THREE LITTLE CHAIRS.

They sat alone by the bright wood fire,
The gray-haired dame and the aged sire,
Dreaming of days gone by;
The tear-drops fell on each wrinkled cheek,
They both had thoughts that they could not speak,
As each heart uttered a sigh.

For their sad and tearful eyes descried
Three little chairs placed side by side,
Against the sitting-room wall;
Old-fashioned enough as there they stood,
Their seats of flag and their frames of wood,
With their backs so straight and tall.

Then the sire shook his silvery head,
And with trembling voice he gently said—
"Mother, those empty chairs!
They bring us such sad, sad thoughts to-night,
We'll put them forever out of sight,
In the small dark room, up stairs."

But she answered, "Father, no, not yet,
For I look at them and I forget
That the children went away.
The boys come back, and our Mary, too,
With her apron on of checkered blue,
And sit here every day.

Johnny still whittles a ship's tall masts,
And Willie his leaden bullets casts,
While Mary her patchwork sews;
At evening time three childish prayers
Go up to God from those little chairs,
So softly that no one knows.

Johnny comes back from the billow deep,
Willie wakes from the battle-field sleep,
To say a good-night to me;
Mary's a wife and mother no more,
But a tired child whose play-time is o'er,
And comes to rest on my knee.

So let them stand there, though empty now,
And every time when a one we bow
At the Father's throne to pray,
We'll ask to meet the children above,
In our Saviour's home of rest and love,
Where no child goeth away."

—*Mrs. H. T. Perry in Evangelist.*

DOMESTIC ECONOMY;

OR,

HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

[Entered according to Act of Congress, in the year 1866, by R. P. Eaton & Co., in the Clerk's Office of the District Court for the District of Massachusetts.]

CHAPTER XV.

FOOD AND ITS PREPARATION.

Time was when puddings were the first course at dinner. Now they are often crowded entirely from our bill of fare by the too plentiful consumption of animal food that precedes them. But we should probably gain much by a return to the old fashioned routine of dietetics. Our systems are burnt up, so to speak, by the excess of carbon which the immoderate use of animal food supplies; New Englanders, especially, suffer greatly from this cause.

In those days, too, puddings were of simpler style than these that now suit our pampered appetites. A few specimens of those primitive dishes are indeed occasionally suffered to grace the family board, but many persons, considering them mean and meagre, are so careless in their preparation that the once really nice and palatable food makes its appearance at table as a mess scarcely fit for the fare of brutes. Take for example mush, or hasty pudding,—(stirabout of the Scotch, furmity of the English) how often is it seen no better than the scalded meal of the stable and the barnyard, which one must be hungry indeed to eat. This is made, as we all know, of ground grain,—Indian-corn, rye, wheat, or oats—in the simplest manner, and the best to develope its nutritive qualities. Hence it is particularly desirable for the food of children and invalids. Perhaps some may consider directions for preparing this dish unnecessary; but I have seen so much waste and misuse of God's good gifts through heedlessness, or ignorance of little matters, that I cannot let even this A B C of cookery pass without the pointer at its individual proprieties. And as the worthiest of college students deem hasty pudding a dainty fit for festal cheer, and form clubs in its honor; and as one of New England's earliest bards has made hasty pudding the subject of an epic poem, and immortalized his name thereby, I believe most of my readers will acknowledge the importance of the following detailed directions:—In the first place, though it is called hasty pudding, it cannot be hurried; it must have a good deal of time and patience to make it what it ought to be. Use a deep kettle, iron or porcelain-lined. Fill this with water boiling hot. Sprinkle in as much salt as for making bread. Set it upon the hot stove or range, or hang it over a clear fire. Mix half the quantity of meal intended to be used with cold water, smoothly, and thin enough to stir easily with an iron or a wooden spoon. Make it of the consistency of soup by pouring upon it boiling water from the kettle, stirring it thoroughly the while. Then return it to the kettle. Stir it till it boils furiously. Then sprinkle in a small handful of meal (bolted meal or wheat flour if you wish for something a touch above common), and, while sprinkling, stir rapidly, from left to right, ("the way the sun goes," say the old folks); stir till the lumps are all gone; then let this boil three or four minutes. Then sprinkle and stir in another handful and wait for it to boil the same length of time, and so continue till the mixture is stiff enough to bear up the spoon. It must then remain, puffing and steaming, over the fire, ten minutes. At the end of that time take it into a deep dish and place it upon the table. Eat it with a little butter and molasses, or syrup, or sugar; or with plenty of milk and berries, peaches, or baked sweet apples or pears; or substitute a little cream and sugar for the milk with the fruit. Cold hasty pudding, cut in slices a quarter of an inch thick and fried in salt pork fat, or salted

lard, just enough to keep it from adhering to the pan, is very nice if well browned on each side; sugar may be sifted between the slices as they are piled in the dish, or syrup applied at table.

Cracked corn, or hominy, should be soaked in cold water over night; then with twice its measure of cold water slightly salted set to boil over a moderate fire till nothing but the soft hominy remains. Grits—cracked wheat—need to be washed to remove the bran (unless the pudding is for dyspeptics). Boil them the same as hominy; and send both to the table with the same additions as hasty pudding.

Corn or potato starch, arrow-root, ground tapioca, farina, maizena, or even plain wheat flour, mixed as for hasty pudding, but needing only half the boiling, makes a more delicate dish,—to be eaten with sugar and cream, or a hot fruit sauce. Ground cocoanut is a great addition to these puddings. Soak it over night in water or milk that is to be boiled slowly half an hour before mixing with the other ingredients.

Among the simpler puddings we have also samp, the whole corn cleared of its hull—(the *enamel*, that coats the grain, we may call it). This is decidedly of American origin, the first white settlers borrowing of the neighborly Indians their receipt for making it. It is more convenient to make this in large quantities, and it will keep nice a week. Take the fairest kernels from the best-ripened corn-cobs. Wash four quarts and soak it in cold water over night. Have ready a bag—made by folding one width of thick crash about a foot long and stitching it with strong thread in short, close stitches down the side and across one end and then turning it inside out and stitching it again in the same manner. Fill this bag till within three inches of the top with hard-wood ashes. Wind around the open end a strong string, and tie it very tightly, so that no ashes can escape. Place this bag to soak with the corn. In the morning put both into a three gallon boiler, and pour upon them cold water till within two inches of the boiler's brim. Set this over a slow fire. Let it boil steadily, yet gently, till the hulls are loosened. Then take away the bag of ashes and skim the corn into dishes of cold water, in which rub and rinse it till the kernels are cleared from their hulls,—which can be skimmed from the surface of the water. Place in the bottom of the boiler a small plate or saucer—to prevent the softening corn from catching and burning there—and return the corn; cover it with the same quantity of cold water, and boil as before for three hours. Then skim it again into fresh water and rub and rinse it thoroughly. Once more return it to the boiler; if you choose add a tablespoonful of salt to the cold water (same quantity as before), and boil it till it is soft enough to eat. Set it upon the table with the same additions as for hasty pudding. Some persons remove the hulls by saleratus, soda, or potash, mixed with the water; but the original method—by weak lye—is preferable.

To make the Sunday Indian pudding of New England: scald half the milk that you wish to use and stir into it slowly Indian meal, till it is of the consistency of thick batter. Then add molasses to suit your taste; and salt and ginger. Butter a potter's pan and put in it half the unscalded milk, and then pour in the pudding; and stir into it the remainder of the milk—this is to make the whey, which serves as sauce. If you wish for a very rich pudding, add coarse chopped beef-suet and raw apples peeled and quartered, either sweet or sour—stir in just before placing it in the oven,—which must be of a moderate heat. Bake it slowly. Eggs may be added, and sugar used instead of molasses; but it is good enough without.

A boiled Indian pudding, made by scalding the meal as stiffly as it can be stirred, and then mixing with it an equal quantity of blueberries or huckleberries—fresh in the summer, the canned, or the dried berries, swollen, in the winter—and cooking it in a bag like that used for ashes in making samp, is a very good old-fashioned dish. So is an Indian suet pudding, made in the same way,—adding molasses to the taste, and beef-suet cut in small pieces, with a little salt. Boil this in a tin pudding-mould three hours. The berry pudding will cook in two hours, and needs a hot sweet sauce.

Rice, the whole grain, set upon the table with the same accompaniments as for hasty pudding is a very appetizing dish. Or it may be used as a substitute for potatoes with fresh meats. But it needs particular cooking. Overdone, watery, or clammy rice is miserable. It should be *steamed*. Pick it over carefully, removing all unhusked grains as well as all stones. Wash it well by rubbing it gently in cold water and rinsing it a second time; then salt it a little and put it into a deep dish that is set in the steamer in the top of the dinner boiler,—the boiler should be half full of boiling water. Keep it boiling till the rice is swollen to the appearance of parched corn, each kernel separate and dry. It takes a little more time to cook it in this way than to boil it, but it is always sure to be done nicely.

[TO BE CONTINUED.]

HOUSEHOLD ECONOMY.

CONTRIBUTED FOR THE NEW ENGLAND FARMER.

Pickled Apples.

Take small hard apples and stick two or three cloves in each, or cut larger apples in halves or quarters; simmer till soft in a syrup made of a pint of vinegar and a pound of sugar, in which a stick of cinnamon should be boiled.

Cherries are very nice, pickled in the same way, with the exception of tying the spices up in a muslin bag. Leave the stems on.

Salad Dressing for Blanched Cabbage.

Rub a spoonful of wet mustard and a large teaspoonful of salt into a beaten egg; when perfectly

smooth, add half a cup of boiling hot vinegar, and half a cup of rich milk or cream. Chop a crisp white cabbage and pour this dressing over it just before serving.

Lemon Pie.

One lemon—squeeze the juice and grate a portion of the rind; yolks of two eggs; four spoonfuls of white sugar; half a spoonful of butter; half a spoonful of flour; a third of a tumbler of milk. Bake like a custard, in rich paste. Beat the whites of the eggs with a tablespoonful of sugar to a stiff froth, and spread over the top. Brown in the oven.

Another Lemon Pie,

To be baked with an upper crust. One lemon—squeeze the juice and grate half the rind; a potato, as large as the lemon, grated; a cup of sugar and a cup of water. Mix well, adding a little salt.

Cream Pie.

One cup of sugar; three eggs; one cup and a half of flour; a teaspoon of cream of tartar, and half a teaspoon of soda; spice and salt. This makes two pies on round tins. Split them when cool.

For the inside—one cup of sugar; half a cup of flour; two eggs well beaten together; stirred into a pint of boiling milk. Flavor with lemon or vanilla.

A Nice Dish for Breakfast.

Toast stale bread nicely; drop eggs in boiling water till the whites are coagulated; dip the toast in butter with a little hot water added, or simply spread with butter; cut the slices in three or four pieces, lay an egg on each, with a sprinkling of salt and bit of butter.

Torturing Neuralgia

Has been speedily relieved by a flannel bag of hops sprinkled with vinegar and made very hot. Cover it with hot, dry, flannel, to retain the heat as long as possible. MARY.

Parsonsfield, Me., March 14, 1869.

Lemon Pie.

Take one large lemon; cut off the outside skin, so that no yellow is left, and then cut round in very thin slices; lay them evenly on your crust, only one thickness; scatter over a little flour and one cup of sugar; add four tablespoonfuls of water, and your pie is ready for the top crust. Bake in a slow oven.

Another Way.

For three pies, take two lemons; grate off the yellow; roll them till soft, and squeeze out the juice in a cup; chop the lemons very fine; take two cups of water; a cup and a half of sugar; half a cup of flour; put in the lemon juice; stir them all together and pour on your crust; then cover as soon as possible, and set in a quick oven. Bake half an hour. LEAH.

Guilford Centre, Vt., March 15, 1869.

REMARKS.—We are glad to find our lady correspondents once more resuming their pens to aid us in filling the portion of our paper set apart for their special benefit. We have other communications on hand which we shall make room for at an early date, and are always pleased to receive communications on subjects of practical interest, especially on questions pertaining to Domestic Economy. We resume, this month, the series of articles by Miss Hale, interrupted by the illness of the author. ED.

A RARE DOORSTEP ACQUAINTANCE.

There is a little old Genoese lady comes to sell us pins, needles, thread, tape, and the like *roba*, whom I regard as leading quite an ideal life in some respects. Her traffic is limited to a certain number of families who speak more or less Italian, and her days, so far as they are concerned, must be passed in an atmosphere of sympathy and kindliness. The truth is, we Northern and New World folk cannot help but cast a little romance about whoever comes to us from Italy, whether we have actually known the beauty and charm of that land or not. Then this old lady is in herself a very lovable kind of person, with a tender mother-face, which is also the face of a child. A smile plays always upon her wrinkled visage, and her quick and restless eyes are full of friendliness. There is never much stuff in her basket, however, and it is something of a mystery how she manages to live from it. None but an Italian could, I am sure, and her experience must test the full virtue of the national genius for cheap salads and much-extenuated soup-meat. I do not know whether it is native in her, or whether it is a grace acquired from long dealing with those kindly-hearted customers of hers in Charlesbridge, but she is of a most munificent spirit, and returns every smallest benefit with some present from her basket. She makes me ashamed of things I have written about the sordidness of her race, but I shall vainly seek to atone for them by open-heartedness to her. She will give favor for favor; she will not even count the money she receives; our bargaining is a contest of the courtliest civilities, ending in many an "Adieu!" "To meet again!" "Remain well!" and "Finally!" not surpassed if rivaled in any Italian street. In her ineffectual way she brings us news of her different customers, breaking up their stout Saxon names into tinkling polysyllables which suggest them only to the practiced sense, and is perfectly patient and contented if we mistake one for another. She loves them all, but pities them as living in a terrible climate; and doubtless in her heart she purposes one day to go back to Italy, there to die. In the meantime she is very cheerful; she, too, has had her troubles,—what troubles I do not remember, but those that come by sickness and by death, and that really seem no sorrows until they come to us,—yet she never complains. It is hard to make a living, and the house-rent alone is six dollars a month; but still one lives and does not fare so ill either. As it does not seem to be in her to dislike any one, it must be out of a harmless guile, felt to be comforting to servant-ridden householders, that she always speaks of "those Irish," her neighbors, with bated breath, a shaken head, a hand lifted to the cheek and an averted countenance.—*Atlantic Monthly for April.*

THE UNHOLY DESIRE OF DRESS.

You wish to dress your wife better than your circumstances will allow. She wants to have you. She is a woman of spirit, as it is said, and she does not mean to be a drudge. "Why should our neighbors," she says to her husband, "dress any better than we? They are made of the same flesh

and blood that we are. See how they come out. I don't think a man of any spirit would let his wife and children go to church dressed as you let us go. Look at these children. You would think that they had just come out of some slop-house! If I had married as I might have married, we should have had different times—I and my children!" How many men are stung to the quick by such remarks from their wives! Oftentimes their moral sense revolts, at first, and they feel indignation; but "continual dropping wears a stone;" and by and by the man is dressed a little better than he can afford, and his wife and children are dressed better than he can afford; and somebody must pay for the extravagance. I do not say that they are tempted to steal; but I do say that they grind. They mean somehow to get it out of the milliner, out of the dress maker, or out of the merchant. They intend to make one hand wash the other somehow, and they go into petty meanness to bring it about. And this desire to dress better than they can afford is taking off the very enamel of their virtue, and taking out the very stamina of their religious life. Unimportant as it seems, ostentatious vanity in dress has ruined many a family, and damned many a soul!—*Henry Ward Beecher.*

THE PROPER SIZE OF A LADY'S FOOT.—Boots, ladies' boots, are the subject of a letter from Mr. Buomi to the London Builder—a strange medium for such a topic, by the way. He has been measuring the foot of the Venus de Medici, or rather (it amounts to the same thing) of an accurate cast of the statue. The erect height of the figure is, as is well-known, five feet two inches, and he finds the length of the foot to be exactly nine inches, or as nearly as possible one-seventh of the height. The breadth of the widest part of the sole is three and three-eighths inches, a fraction over one-eighteenth of the figure's stature. From these data, and a knowledge of her height, every lady can determine what should be the size of her boots; she may exceed the dimensions given in the formula if she sees fit, but woe to her health, and, according to Mr. Buomi, good-bye to the symmetry of her pedals, if she tries to squeeze them into anything less. But does the Venus, or any other idealization, represent every case of the humanity it typifies? If, as is certainly the case, some feminine extremities exceed the sculptor's proportions, others as certainly fall within them; and it is hardly likely that the possessors of these will wear boots too big for them merely for the sake of conforming to a fancy standard.

WOMAN'S LABOR.—According to certain rules of society, women are required to look upon labor as a degradation and a disgrace, and to disrespect the remuneration they get from manly toil. It is different among the male portion of the community. The schoolboy is trained to be a workman, and if society shuts her door on him he has still mechanical skill which brings plenty to rejoice him. The female is not so; she depends upon marriage. You hear a woman say to one who asks her does her daughter work: "My daughter work! Never. My daughter did not do a single piece of work in all her life; she shall marry some day." When it is asked of the painter will he bring his boy up to his own trade—"Bring my boy up to my own trade," says the painter, "Never! he shall be brought up to no labor, he shall be a gentleman," as though a gentleman could mean anything in America but a pure heart, a clear mind, and an unsullied conscience and a manly life.—*Anna E. Dickinson.*

WOMEN AS POSTMASTERS.—President Grant has sent in to the Senate the names of Elizabeth Van Lew to be postmaster at Richmond, Virginia; Eliza F. Evans to be postmaster at Ravenna, Ohio; and Emily J. C. Bushnell to be postmaster at Sterling, Illinois. It is not a new thing under the sun that a woman should be made postmaster; in England many of the country offices are in charge of women; in this country several Presidents have appointed women to such places; and certainly no one can object to the appointment of Elizabeth Van Lew, which is "in acknowledgment of important services to the Union army during the rebellion." A woman who was able to render "important services" to her country during a time of war, is doubtless able to manage a post-office.—*New York Evening Post.*

ONLY THE TRUTH.—An unknown lady recently wrote thus, and how truly:—

"It would be no privilege to be the wife of the larger proportion of the men one meets on the street; and I not unfrequently find myself analyzing masculine faces, and guessing at the relationship existing between such a one and his wife. It is but rarely, I confess it, that I meet a face which tempts me to say, 'Happy is the woman that calls thee lord!' And yet I repeat my honest conviction that the relationship of wife and mother is the purest and noblest, the most sacred, and the most elevating in the entire range of the humanities."